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# **The Role of Institutions in Shaping Foreign Capital: Evidence from South Africa and Zimbabwe**

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## Abstract

The purpose of the study is to investigate the impact of institutions (particularly property rights) on foreign capital in two Southern African countries (namely Zimbabwe and South Africa). This is motivated by the recent theoretical emphasis on the role played by institutional factors such as property rights protection and the rule of law in determining economic outcomes.

The thesis addresses a critical issue concerning the measurement of institutional variables in empirical work. While the political science and political economy fields have produced several institutional indices, most are time truncated. Most existing indices are therefore only useful in cross-country and panel studies, but not useful for country-specific studies. This limits any path-dependency exploration on the link between institutions and economic outcomes.

To address the measurement challenges, a new set of institutional indicators measuring *de jure* property rights, *de jure* political freedoms and *de facto* political instability are constructed for Zimbabwe for the period 1946 to 2005 by this dissertation. The Fedderke *et al* (2001) Delphi technique used in the construction of the *de jure* property rights and political freedom indices fits in well with the North (1990) institutional theoretical framework employed here.

Making use of the newly constructed property rights index in a multivariate cointegration framework, the study establishes the impact of property rights on foreign direct investment (FDI) in Zimbabwe for the period 1964 to 2005. The empirical results indicate that property rights are consistently an important explanatory variable of FDI, even after controlling for periods when there are no significant new foreign capital inflows. Other significant variables

that explain FDI in Zimbabwe include the real gross domestic product (GDP), capital intensity, the external debt to GDP ratio, political instability as well as the educational levels.

In the case of South Africa, the thesis investigates the impact of property rights, domestic risk and neighbourhood effects on the absolute levels of FDI and portfolio investment stocks as well as the relative share of FDI in total foreign capital stocks. Domestic risk is measured by the South African-American sovereign spread. This risk measure captures both the default and currency risks since the sovereign bonds are denominated in different currencies. Neighbourhood effects are captured by introducing the property rights index for Zimbabwe as an explanatory variable for foreign capital stocks in South Africa.

The empirical evidence for South Africa shows that while domestic risk reduces the absolute levels of FDI and portfolio investment, secure property rights positively affect both FDI and portfolio investment. These results are in line with the theoretical proposition of the portfolio diversification literature.

In terms of neighbourhood effects, the results indicate that weak property rights in Zimbabwe lead to an increase in the absolute level of FDI stocks but reduce the absolute level of portfolio investment stocks in South Africa. The results suggest that when property rights in Zimbabwe deteriorate, long-term foreign investors may relocate their investment from Zimbabwe to South Africa. However, weak property rights in Zimbabwe have a negative spill-over effect on the short-term portfolio investment flows in South Africa.

Regarding the composition of foreign capital stocks in South Africa, the results show that the relative share of FDI in total foreign capital stocks is positively related to property rights but negatively related to domestic risk. This suggests that FDI in South Africa is not inalienable. As such, when property rights weaken or domestic risk goes up, the relative share of FDI in total foreign capital stocks decreases. This occurs because foreign direct investors tend to

reduce the levels FDI relative to other foreign capital inflows when faced with expropriation risk.

The results also show a negative relationship between the property rights index for Zimbabwe and the relative share of FDI in total foreign capital stocks in South Africa. This indicates that deteriorating property rights in Zimbabwe result in an increase in the relative share of FDI in total foreign capital stocks in South Africa.

In both the cases of South Africa and Zimbabwe, our empirical results confirm the existence of feedback effects from FDI to output. This supports the notion that FDI has some output-enhancing effects in the host country. Overall, the study shows that property rights, domestic risk and neighbourhood effects in the recipient country are critical in shaping the absolute levels of foreign capital stocks as well as the composition of foreign capital stocks.

The main policy recommendation for Zimbabwe and South Africa is that, to increase the levels of foreign capital inflows, the host country governments should ensure sound institutions both at home and in the region. Another recommendation of the study is that, if the South African government wants to shift the composition of its foreign capital stocks from portfolio investment to FDI, they should put in place policies that promote secure property rights and low domestic risk.

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## **Dedication**

To my Mother and Late Father

University of Cape Town

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## **List of Acronyms**

ADF	Augmented Dickey-Fuller
ARDL	Autoregressive Distributed Lag
BAZ	Broadcasting Authority of Zimbabwe
BERI	Business Environmental Risk Intelligence
BI	Business International
BOP	Balance of Payments
BSCo	British-South African Company
CSO	Central Statistical Office
EFW	Economic Freedoms in the World
ESAP	Economic Structural Adjustment Programme
ESC	Electoral Supervisory Commission
FDI	Foreign Direct Investment
FH	Freedom House
FIC	Foreign Investment Centre
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
HF	Heritage Foundation
ICRG	International Country Risk Guide
ILO	International Labour Organisation
IMF	International Monetary Fund
JSE	Johannesburg Stock Exchange
LRA	Labour Relations Act
LSE	London Stock Exchange
MDC	Movement for Democratic Change
MNC	Multinational Company
NCA	National Constitutional Assembly
NGO	Non-Governmental Organisation
NIE	New Institutional Economics
OLI	Ownership Location Internalisation framework
OLS	Ordinary Least Squares
OSA	Official Secrets Acts

PCSE	Panel Corrected Standard Errors
POSA	Public Order Security Act
PSC	Public Service Commission
PSS	Pesaran, Shin and Smith
RF	Rhodesian Front
SADC	Southern African Development Community
SARB	South African Reserve Bank
SSA	Sub-Saharan Africa
TNC	Transnational Company
UFP	United Federal Party
UNCTAD	United Nations Conference on Trade and Development
VECM	Vector Error Correction Modelling
ZIC	Zimbabwe Investment Center
ZLHR	Zimbabwe Lawyers for Human Rights
ZSE	Zimbabwe Stock Exchange

# Chapter 1

## 1. Introduction

### 1.1. Background and Motivation of the Study

It is now widely accepted that institutions are important in determining long-run economic performance. There has been a shift of focus from the traditional causes of growth such as factor accumulation and technological innovation to the role of institutions which are believed to be deep structural determinants of economic performance.

Institutions are defined along a wide continuum but North's (1990) view of institutions has become widely accepted. North (1990) defines institutions as rules of the game or humanly devised formal and informal constraints shaping human interaction in social activities. Earlier, the traditional<sup>1</sup> and the new<sup>2</sup> growth theories focused on physical capital, human capital and technological advancement as the major determinants of economic performance. However with the emergence of the new institutional economics (NIE henceforth), it has been argued that in addition to factor accumulation and technological innovation, there exists deep structural determinants of economic performance related to the institutional structure of societies, (North and Thomas, 1973).

The question often raised in this regard is why some societies manage to accumulate capital, innovate and develop more rapidly than others. Two strands of thoughts have been put forward to explain these fundamental determinants of economic growth.

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<sup>1</sup> See for example Solow (1956) and Cass and Koopmans (1965).

<sup>2</sup> See for example Romer (1990), Grossman and Helpman (1991) and Aghion and Howitt (1992).

The first strand emphasizes the importance of geography. Geography is seen as a key determinant of climate, endowment of natural resources, disease burden, transport costs and diffusion of knowledge and technology from more advanced areas. Through influencing these mentioned factors, geography is deemed to exert a strong influence on agricultural productivity and the quality of human capital, which in turn affects economic performance. Sachs and Diamond<sup>3</sup> are the major proponents of this view.

The second strand, our focus in this study, emphasises the importance of institutions. The key contributions towards the development of formal theoretical frameworks that incorporate institutional factors in explaining economic performance are by North, Thomas, Acemoglu, Johnson and Robinson.<sup>4</sup> According to this approach, institutional factors such as property rights and rule of law directly influence transaction and information costs thereby affecting economic performance in the long-run. For instance, with insecure property rights, corruption and unreliable rule of law, private firms typically operate on a small scale and may rely on bribery to facilitate operations. By reducing uncertainty, strong institutions reduce transaction costs, information costs and risks for private firms.

Much empirical work has also been done in recent years to identify the causal impact of institutions on economic performance. Mauro (1995), Knack and Keefer (1995) and Hall and Jones (1999) identified a correlation between a range of institutional factors such as property rights, corruption and bureaucratic quality on the one hand and economic outcomes on the other hand.

The question then turned to the issue of the direction of causality. On this front, the work of Acemoglu, Johnson and Robinson (2001) is particularly significant. To avoid endogeneity problems, the authors used the mortality rates of colonial settlers in the colonies of European

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<sup>3</sup> See for example Diamond (1997), Gallup and Sachs (1998) Sachs (2001).

<sup>4</sup> See for example North and Thomas (1973), North (1990, 2005), and Acemoglu, Johnson and Robinson (2004).



powers to instrument for institutions. Their empirical evidence supports the causal impact of property rights and rule of law on economic performance. Using the same instruments as Acemoglu *et al* (2001), Rodrik *et al* (2002) established that compared with geography or trade, the quality of institutions is the most important factor explaining economic outcomes.

As part of the broader debate on institutions and economic growth, some literature focuses on the link between institutions and foreign capital inflows. This literature hinges on the notion that foreign capital inflows have a positive impact on economic performance in developing countries. For instance, foreign direct investment (FDI henceforth) has been found to stimulate investment and raise productivity and efficiency of the recipient economy. Borensztein *et al* (1998) argue that once a certain threshold in the level of education has been reached, FDI has some growth-enhancing effects on the recipient economy. This emanates from the complementarity of FDI and domestic investment in production and the positive technological spill-over effects.

Portfolio equity flows have also played an important role in plugging the domestic resource gap in developing countries through the provision of external firm finance. Claesens *et al* (1995) and Stultz (1999) found that the increase in equity flows has been associated with significantly lower cost of equity capital to firms in developing countries.

However, foreign capital inflows could also have negative effects on developing countries. The most critical negative effect of foreign capital inflows, especially regarding portfolio flows, is the increased vulnerability of the recipient country to financial and exchange rate crises caused by high volatility and unpredictability of the short-term foreign capital inflows.

Taking the positive impact of foreign capital inflows in developing countries as given, questions have arisen on how institutions affect these foreign capital inflows. The international business and the political economy theorists suggest that institutions directly

play a key role in facilitating inflows of foreign capital by providing an enabling environment with well secured property rights and low transaction and information costs. Indirectly, institutions can also affect capital flows through their impact on economic performance in the host country. The work of Wheeler and Moody (1992), Gastanaga *et al* (1998) and Li and Resnick (2003) among others demonstrated how a range of institutional factors such as property rights, corruption and political instability affect FDI.

While theory strongly supports the importance of institutions, empirical work faces a number of challenges regarding the measurement of institutions. Firstly, most existing institutional indicators have limited time coverage.<sup>5</sup> The truncated nature of the indicators limits their usefulness in country-specific studies that require large runs of data over time. Because of this limitation, the bulk of empirical work linking institutions and economic outcomes are based on either cross-country or panel studies. While these studies provide useful insights, they do not account for heterogeneity across countries.

Secondly, Glaeser *et al* (2004) pointed out that most of the current measures of institutions<sup>6</sup> used in the literature are outcome-based measures and do not reflect institutions as defined by North (1990). Outcome-based measures are influenced by actual economic and political outcomes rather than the legal systems and rules in the host country. The major disadvantage of these measures is that they are endogenous to economic outcomes and cannot be used to investigate the causal impact of institutions on economic performance.

The thesis is motivated by the observation that although theoretical developments recognise the importance of institutional factors as determinants of foreign capital inflows, country-level

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<sup>5</sup> Fedderke (2005).

<sup>6</sup> The most commonly used institutional indices are those produced by the Freedom House, Heritage Foundation, Fraser Institute, the Political Risk Services Company and the International Country Risk Guide (ICRG).

empirical evidence is limited. This gap emanates from the limited availability of measures of institutions with time coverage long enough for use in country-specific time-series studies.

## **1.2. Objectives of the Study**

The study has three key objectives. The first objective is to evaluate the nature of the institutional environment in Zimbabwe for the period 1946 to 2005. This is achieved by constructing a set of time-series indices of property rights, political freedoms and political instability. The indices are consistent with the North (1990) definition of institutions employed in the study and also have wide time coverage.<sup>7</sup> The new dataset contributes towards resolving the problem of the limited availability of institutional indicators usable in country-specific time-series studies.

The second objective is to establish the impact of property rights protection on the levels of FDI in Zimbabwe for the period 1964 to 2005. The study makes use of the newly constructed property rights index to measure the strength of institutions in Zimbabwe.

The third objective is to investigate the impact of institutional factors and risk on the absolute levels and the composition of foreign capital stocks in South Africa over the period 1960 to 2005. This is achieved by undertaking an empirical analysis of the impact of property rights, domestic risk and neighbourhood effects on the absolute levels of FDI and portfolio investment stocks as well as the relative share of FDI in total foreign capital stocks.

In contrast to earlier work, our empirical analysis is based on country-specific time-series data. While the two countries chosen are both located in the Southern African region and also share a common border, their economic performance varies significantly. South Africa, on the one hand, is a middle income country receiving a large share of foreign capital flows going to

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<sup>7</sup> In the case of South Africa, such indicators have already been constructed by Fedderke *et al* (2001).

the Sub-Saharan African region.<sup>8</sup> Zimbabwe, on the other hand, is a low-income country that has been experiencing a continuous economic decline and a sharp decrease in the levels of foreign capital inflows since the late 1990s.

### **1.3. Organisation of the Thesis**

The thesis consists of five chapters. The first chapter is an introduction to the thesis. Chapter two looks at the challenges of measuring institutions in empirical work. A new dataset of measures of property rights, political freedoms and political instability are constructed for Zimbabwe for the period 1946 to 2006. Chapter three investigates the impact of property rights on foreign direct investment in Zimbabwe over the period 1964 to 2005. This is followed by chapter four which is concerned with establishing the effects of property rights, domestic risk and neighbourhood effects on the levels and composition of foreign capital stocks in South Africa. Finally, chapter five presents the conclusion and policy recommendations.

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<sup>8</sup> The World Development Indicators online data shows that between 2000 and 2004, South Africa on average attracted 20% of all foreign direct investment going to Sub-Saharan Africa.

# Chapter 2

## 2. Measuring Institutions: The Zimbabwean Case

### 2.1. Introduction

Since the late 1990s, the Zimbabwean economy has been grappling with a state of rapid and continuous socio-economic deterioration. According to the World Bank Development Indicators shown in table 2.1, the per capita annual GDP has been declining continuously at an annual average rate of 6.2% since 1999. Although the country experienced episodes of negative growth rates between 1964 and 1995, none of the recessions were as persistent as the current recession which started in 1999 (see figure 2.1).

Accompanying the poor growth rate is a continuously worsening hyper-inflationary environment. The inflation rate hiked from 65% in 1999 to 240% in 2005. Domestic and foreign investment also fell rapidly. For instance, the net FDI declined from its historically high level of US\$ 444 million in 1998 to an annual average of below US\$ 150 million in the subsequent years. In addition, the gross fixed capital formation (GFCF henceforth) fell from an annual average rate of 20% in the 1990s to 15% in 2005.

A variety of factors ranging from unfavourable climatic conditions<sup>9</sup> to policy-related macroeconomic imbalances<sup>10</sup> have been offered to account for Zimbabwe's persistent growth problem. However, there is a view that the weak economic and political institutional framework characterised by insecure property rights and an unreliable rule of law is at the centre of the persistent growth problem.<sup>11</sup> This view accords well with the NIE literature

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<sup>9</sup> The droughts in 1983, 1986, 1992, 1995 and 2001 to 2002 resulted in a contraction of the agricultural sector with negative implications for the overall economic performance.

<sup>10</sup> Since independence, the government's expansionary fiscal policy has resulted in a destabilising government deficit, excessive foreign debt and inflationary pressures.

<sup>11</sup> See for example the arguments in Richardson (2005a, 2005b) and Bates (2006).

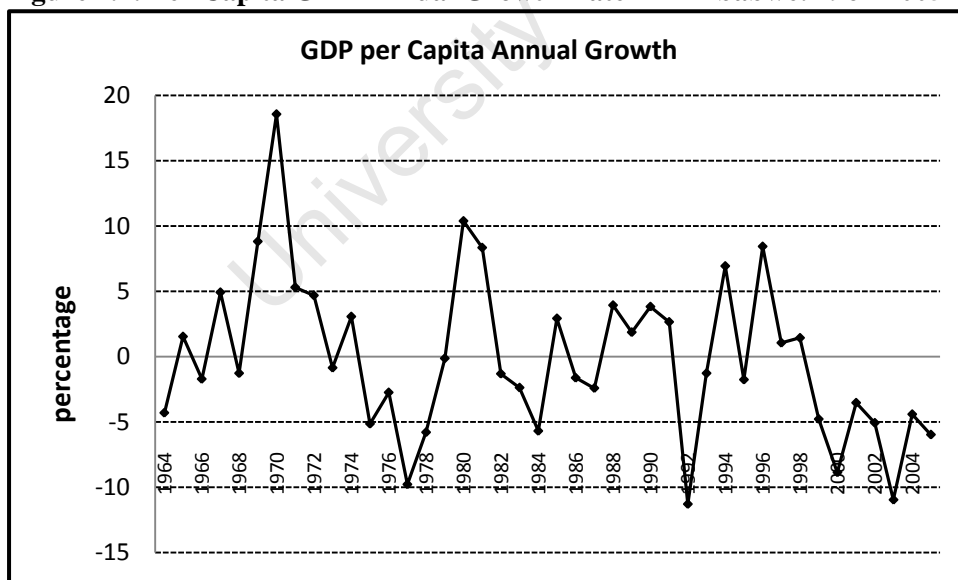
which argues that strong economic and political institutions are fundamental ingredients for good economic performance.

**Table 2.1 Macroeconomic Indicators for Zimbabwe**

Year	Per Capita Annual GDP Growth %	Inflation rate %	FDI inflows in US\$	GFCF % of GDP
1964-1970	3.88	2.5	----	12.46
1970-1979	0.71	7.0	18.47	16.98
1980-1989	1.38	12.09	-4.88	16.18
1990	3.82	15.00	-12.22	18.21
1991	2.65	31.00	2.79	20.58
1992	-11.30	28.00	19.00	22.36
1993	-1.28	22.00	38.00	23.59
1994	6.93	21.00	41.00	21.37
1995	-1.77	10.00	117.70	24.58
1996	8.43	26.00	80.90	18.04
1997	1.05	16.00	135.10	18.05
1998	1.43	37.00	444.30	17.06
1999	-4.79	65.00	59.00	13.25
2000	-8.87	56.00	23.20	11.79
2001	-3.54	122.00	3.80	11.00
2002	-5.08	151.00	25.90	9.01
2003	-10.97	263.00	30.00	12.58
2004	-4.42	350.00	60.00	15.42
2005	-5.98	240.00	102.80	15.00

Source: World Bank Development Indicators

**Figure 2.1: Per Capita GDP Annual Growth Rate in Zimbabwe: 1964-2005**



Source: World Bank Development Indicators.

In light of the above, an understanding of the determinants of long-term economic outcomes in Zimbabwe is important. While investigating the role of macroeconomic and geographical

factors is not a major challenge, testing the hypothesis of the long-term link between economic outcomes and institutions presents some methodological difficulties. The difficulties arise because there is no universally agreed way of measuring institutions. Furthermore, most existing empirical indices measuring institutions have limited time coverage, thus limiting their usefulness in country-specific studies.

The purpose of this chapter is therefore to evaluate the nature of both political and economic institutions in Zimbabwe for the period 1946 to 2005. This will be achieved by constructing indicators of formal or *de jure* property rights and political freedoms. In addition, we also build a *de facto* political instability index for the period 1950 to 2005. The resulting data base enables the testing of several hypotheses on the long-term link between institutions and economic outcomes in Zimbabwe.

The lengthy time period is chosen following the suggestion by Kaufman *et al* (2003) that the likelihood of observing significant changes in institutional variables substantially increases with the length of time under consideration. We will also undertake a comparative analysis of the institutional structures in Zimbabwe and South Africa. This will be done using the data set for Zimbabwe constructed in this chapter and the data set for South Africa constructed in Fedderke *et al.* (2001).

The rest of the chapter is organised as follows. Section 2.2 outlines the theoretical framework. This is followed by the literature review on the measurement of institutions and the link between economic performance and institutions in section 2.3. The limitations of existing empirical measures of institutions are also highlighted in section 2.3. Section 2.4 details the empirical methodology for constructing the *de jure* property rights and political freedom indices. Sections 2.5 and 2.6 present the construction and interpretation of the *de jure* political freedom and property rights indices respectively. Section 2.7 discusses the construction and

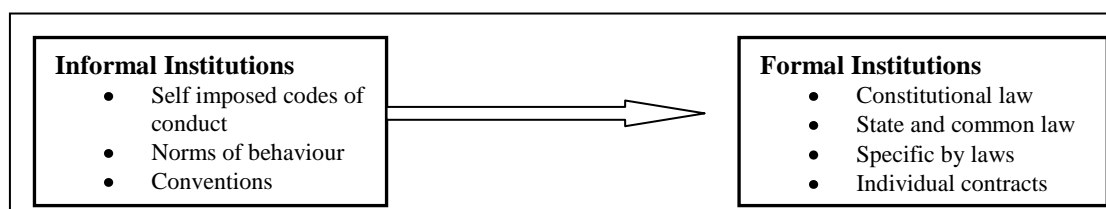
interpretation of the *de facto* political instability index. Section 2.8 presents a comparative analysis, while section 2.9 concludes the chapter.

## 2.2. Theoretical Framework

North (1990) offers a useful framework for considering both the measurement of institutions and the impact of institutions on economic outcomes. North (1990) views the institutional framework as comprising both formal and informal constraints governing economics and politics. As shown in box 1, there exist a continuum with unwritten taboos, customs and traditions at the one end of the continuum and constitutions and formal laws governing economics and politics at the other end. In the absence of formal rules, a dense social network leads to the development of customs, laws, trust and normative rules that constitute an informal institutional framework.

The relationship between the formal rules and informal constraints is very complex and not clearly understood, (North, 2005). As such, the combined effects of formal and informal institutions on economic outcomes are also not very clear. North (2005) however remarked that the way in which the economic and political interactions take place depends not only on the formal rules and informal constraints defining the incentive structure, but also on the effectiveness of the enforcement of the rules. Therefore, institutions are weak when sub-optimal rules are enacted and/or when optimal rules are poorly enforced.

### Box 1: North's Institutional Framework





On the link between institutions and economic outcomes, the NIE emphasise the need to start with democratic political institutions and other checks and balances on the government as a mechanism for securing property rights.<sup>12</sup> Once such institutions are in place, investment in human and physical capital and therefore economic growth are expected to follow. This transmission mechanism in which political institutions have positive externalities in fostering economic freedoms thereby increasing the propensity to undertake economic activity is referred to as the Hayek-Friedman hypothesis.<sup>13</sup>

The NIE, however, does not suggest indivisibility between political and economic institutions. Divisibility is regarded as a possibility when autocratic regimes, such as the People's Republic of China, choose to maintain relatively high degrees of economic freedom, for example the security of private property rights. However, under democratic political institutions, the probability that economic freedoms will be well defined is higher, since rational voters have self interested motives to support politicians who support economic freedoms. By contrast, autocratic regimes lack such self-regulating mechanisms and will adopt economic freedoms only by choice.

An alternative hypothesis linking institutions and economic outcomes is the modernisation hypothesis advanced by Lipset (1959). Lipset's central proposition is that minimum threshold levels of economic development and human capital are required in order to sustain democratic political institutions. The postulated link is thus from economic development to political institutional development. This perspective in which causality stems from economic development to political democracy provides little theoretical insights on the possible impact of institutions on economic growth.

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<sup>12</sup> See for example North and Thomas (1973), North (1981, 1990) and Acemoglu, Johnson and Robinson (2004).

<sup>13</sup> See Fedderke (1997).

However, the two alternative views outlined above both emphasise the need to secure property rights to support investment in human and physical capital and they both see such security as a public policy choice. Fedderke (1997) and Wu and Davis (1999) also supported the dominance of property rights over the other institutional factors to explain different patterns of economic development across countries and over time. It is argued that the role of property rights in lowering the uncertainty associated with the interaction between economic agents increases both the volume and growth of exchange between economic agents, hence improving economic growth. In the next section, we review the empirical literature on the measurement of institutions and the link between institutional factors and economic outcomes.

## **2.3. Empirical Literature Review**

### ***2.3.1 Measures of Political and Economic Institutions***

The fields of political science and political economy offer several attempts to quantify both economic and political institutions. This section surveys literature on indicators of property rights and political freedoms.

Although there are several empirical measures of political freedoms, there is no universal agreement among scholars on the ways of empirically measuring political freedom or political democracy. Existing indicators of political freedoms can be subdivided into objective and subjective measures. Attempts to use objective measures include the use of voter turn out statistics (Leaner, 1958; Vanhanen, 1990, 2000); the composition of the legislative and executive branches of government (Cutright, 1963; Vanhanen, 1990, 2000) and the franchise in a political system (Cutright and Wiley, 1969). Bollen (1980) and Bollen and Paxton (2000) argued that objective indicators are not good measures of political freedoms because they are

sometimes influenced by factors that are only marginally related to political rights and political liberties.

The subjective indicators rely on expert judges who rate countries' standing on various aspects of political freedoms such as fairness of elections, the freedom of the media, or the liberties of political groups. These subjective measures dominate the practical and scholarly usage because they are generally viewed as better measures of the political institutional frameworks when compared to the objective indicators (Bollen and Paxton, 2000). Here, we review some of the key opinion-based indicators of political freedoms.

To begin, we consider the Freedom House indices of political rights and civil liberties. The political rights index is a measure of the degree of political competition and the right of citizens to choose their leaders. It is scaled from 1 to 7 (where 1= free and 7 = not free). The civil liberties index, similarly scaled, is a measure of the rule of law and independence of the judiciary. Although the Freedom House indices have a wide country coverage, their time span is limited. The indices are available from 1972 onwards.

Bank's (1971) Cross-Polity Time-Series data includes categorically scaled variables measuring the freedom of group opposition, competitiveness of the nomination process of the chief executive and the legislature and the effectiveness of the elected legislative body in undertaking its duties. Bollen (1980, 1990) computed measures of political democracy based on two core concepts of political liberties and popular sovereignty. Each of these concepts is operationalised using a combination of subjective and objective data. Bollen's democracy data is available on five year intervals starting in 1960. Bollen (1990) cautions against the use of democracy indicators that confound democracy with political stability as these are two related, but separate concepts that should be treated differently.

Jagers and Gurr (1995) assembled a political dataset called the Polity III, now updated to the Polity IV. The most commonly used indicator in the dataset is the variable called “constraints on the executive”. The variable measures the extent of institutionalised constraints on the decision-making power of the executive. It is measured on a 1 to 7 scale, with higher scores representing good institutions. Another important indicator of political institutions in the Polity IV data set is the democracy measure. The democracy measure captures three main elements. These include, the presence of institutions and procedures through which citizens can express effective preference about alternative policies and leaders, the existence of institutional constraints on the exercise of power by the executive and the guarantee of civil liberties to all citizens in their daily lives and in acts of political participation. The polity IV data set covers all independent states starting in 1800 with annual updates.

Fedderke *et al* (2001) constructed an index of political freedoms for South Africa that is based on a global interpretation of the status of both political rights and civil liberties. In building up the index, their methodology made extensive use of the formal legal framework governing political freedoms. The major advantage of the indicator is that it stretches from 1935 to 1997, a time period long enough to allow the use of the index in addressing long-run issues that arise when studying the link between political institutions and economic growth. Furthermore, the use of actual laws in the statute books for rating the status of political freedoms yields an indicator that does not confound *de jure* institutions with *de facto* outcomes. The major limitation though is that the index is only available for South Africa, and therefore cannot be used for cross-country comparative studies.

More recently, Kaufman *et al* (1999, 2002, and 2003) produced several indicators of governance for the World Bank. The World Bank governance concept is much broader in dimension than the indicators above. The six clusters of governance covered are voice and accountability, political stability, government effectiveness, regulatory quality, rule of law

and control of corruption. Each of the six clusters of governance is obtained by combining a number of opinion-based sub-component indicators drawn from a variety of sources. The methodology of construction uses an unobserved components model which expresses the observed data in each cluster as a linear function of an unobserved component of governance plus a disturbance term capturing perception errors. This model yields estimates for each of the six governance measures.

Although the Kaufman *et al* (1999, 2002, and 2003) indicators have the advantage of drawing from a wide range of information, some of the assumptions of the underlying model are limiting. For instance, the model assumes that the distribution of governance is normal with a non-shifting zero mean and a unit standard deviation. The assumption that the mean does not shift is equivalent to assuming that the world average value of institutions does not change over time. A further limitation is that the indicators span over a very short time period, starting in 1996, thus limiting their usefulness in country-specific time-series studies.

Not much work has been done to quantify property rights. Single time point measures are provided by the Fraser Institute in the compilation of the index for Economic Freedoms in the World (EFW) by Gwartney, Lawson and Block (1975-1996) and Gwartney and Lawson (1997-2006). The Heritage Foundation also produces scores of property rights protection as part of their index of economic freedom, Johnson and Sheehy (1995-2006). This index is available on an annual basis starting from 1996. Fedderke *et al* (2001) also evaluated the formal structure of property rights in South Africa for the period 1950 to 1997 by considering the legal and constitutional framework governing protection of immovable property.

The deficiency of property rights indices is coupled with increasing scepticism on the use of Freedom House indices as proxies for concepts such as contract enforceability, security of property rights and rule of law. In response, some academic researchers such as Mauro (1995)

and Knack and Keefer (1995b) are increasingly turning to subjective ratings marketed to international investors by firms specializing in political risk evaluation.

The major ratings services include the Business International (BI henceforth), the International Country Risk Guide (ICRG henceforth) and the Business Environmental Risk Intelligent (BERI henceforth). Using the ICRG data, Knack and Keefer (1995b) constructed an index to capture security of private property and enforceability of contracts. The index loads on five ICRG indicators of expropriation risk, repudiation of contracts by government, rule of law, quality of bureaucracy and corruption in government.

There are some drawbacks associated with the institutional indicators outlined above. Most of the indices are not available for a comprehensive width of geographical coverage, for a range of countries over different levels of development and cultural space, and over sufficiently long time runs to inspire confidence in their usefulness in being able to address the long run and dynamic questions that arise when linking economic performance and institutions.

The short time coverage of most existing measures of institutions has resulted in the Freedom House indices of political freedoms and civil liberties dominating empirical work linking institutions and economic outcomes. The Freedom House indices have the most comprehensive coverage across countries and over time when compared to most existing indicators. Kormendi and Meguire (1985) used the Freedom House civil liberties index as a proxy for economic rights such as freedom from expropriation. The same index was used by Scully (1988) to measure what he called the “institutional framework” comprising the degree of political, civil and economic liberties of nations.

Grier and Tullock (1989) employed the Freedom House civil liberties index again as a proxy for the “political infrastructure”, a measure of the extent of civil liberties of nations. Isham *et al* (1997) used the Freedom House civil liberties indicator to measure the “quality of

governance”.<sup>14</sup> This feature renders the possibility of distinguishing the independent impacts of different institutional dimensions on economic performance particularly in the context of a web of association between social and political indicators pointed to by Fedderke and Kligaard (1996, 1998).

Again, due to the limited time coverage of empirical indicators, most econometrics-based studies that link institutional frameworks of nations and economic outcomes tend to rely on cross-country or panel data that may lead to biased results due to heterogeneity across countries. In order to resolve these methodological issues, there is a need to build comprehensive country-level data sets of institutional indicators that span lengthy time periods.

### ***2.3.2 Impact of Institutions on Economic Performance***

Empirical studies linking institutions and economic performance vary depending on the choice of institutional indices used. In the early work linking political institutions and economic growth, Grier and Tullock (1989) used the Freedom House civil liberties indicator. They constructed a dichotomous variable from the civil liberties measure in which the countries in the two most repressive categories are distinguished from all others. The new dichotomous variable was described as a proxy for the “political infrastructure” of nations. They found that political repression is associated with a significant reduction in annual growth rates in Latin American and African samples, but that repression had no effect in the Asian sample.

A later set of studies investigating the relation of the regime type to growth interpreted the Freedom House political freedoms and civil liberties indexes as measures of democracy. Barro (1996) and Helliwell (1994) found that these indicators are positively related to growth

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<sup>14</sup> Other studies that have also used the Freedom House indexes to proxy for various aspects of the institutional environment include, Barro (1996), Helliwell (1994), Sachs and Warner (1995), Savvides (1995), Alesina *et al* (1994) and Ghura and Hadjimichael (1996).

only if variables such as educational attainment and investment rates are omitted as explanatory variables and concluded that any beneficial impacts of democracy on growth may operate through these factor accumulation channels. Barro (1996), Helliwell (1994) and Burkhardt and Lewis (1994) all concluded that the positive relation between income levels and democracy is most attributable to the former's impact on the latter rather than vice versa. These results are consistent with Lipset's (1959) earlier interpretation of the correlation between income and democracy.

Isham, Kaufman and Pritchett (1997) analysed the impact of the civil liberties and political freedoms on the performance of World Bank-financed projects in various developing countries for the period 1974 to 1993. They found that the rates of return are higher in nations with greater civil liberties measured by the Freedom House civil liberties indicator. However, pure political rights measured by the Freedom House political rights index had no effect on the rates of return to the World Bank projects.

Other studies linking political institutions and economic outcomes make use of composite institutional measures. Mauro (1995) aggregated BI's indices of judiciary efficiency, red tape and corruption into a composite index which he called bureaucratic efficiency. The BI indices are integers between 0 and 10, with higher values of the indices representing goods institutions. The study found a positive and significant relationship between the bureaucratic efficiency index and the average per capita GDP growth rate for the period 1960 to 1985 for a sample of 123 countries. The findings imply that an improvement in political institutions is associated with higher levels of per capita GDP growth rate.

While the above studies only consider the role of political institutions only, theory emphasises the importance of property rights. Kormendi and Meguire (1985) present some of the earliest efforts to empirically link property rights and economic growth. They used the Freedom



House civil liberties as a proxy for property rights. They acknowledged that the civil liberties index is not intended to measure economic rights, but argued that the two were likely to be correlated. Their results suggested that property rights indirectly influences economic growth in a positive manner through investment.

Knack and Keefer (1995b) investigated the impact of property rights and contract enforcement on economic growth and factor accumulation. To measure property rights and contract enforcement, the study aggregated the ICRG indices of expropriation risk, repudiation of contracts by government, rule of law, quality of bureaucracy and corruption in the government. The composite index of property rights and contract enforcement was significant in the investment regression but insignificant in the growth regression. The finding confirms an indirect effect of property rights and contract enforcement on growth through factor accumulation.

Acemoglu *et al* (2001) addressed the problem of endogeneity that arises in studies linking property rights and economic outcomes. Endogeneity arises when there are feedback effects from economic performance to institutions. Empirical results will be biased if endogeneity is not taken into account. Acemoglu *et al* (2001) then used mortality rates of colonial settlers as an instrument of property rights. They argued that while settler mortality rates had an important impact on the quality of past institutions that were built in countries colonised by the main European powers, the mortality rates were not endogenous to economic performance. The study found that property rights have a positive effect on output in the former European colonies.

Rodrik *et al* (2002) examined the extent to which geography, integration and institutions could explain the variation in cross-national incomes world-wide. Following Acemoglu *et al* (2001), they used settler mortality rates as an instrument of property rights.

They concluded that property rights play a dominant role in explaining economic performance when compared to geography and integration.

Acemoglu and Johnson (2005) established the relative importance of “contracting institutions” versus “property rights institutions” for economic growth. Contracting institutions are defined as those institutions supporting private contracts. They defined property rights institutions as those constraining government and elite expropriation of private property. Property rights were proxied by three indicators, the Polity IV’s constraint on the executive measure, the Political Risk Services’ assessment of protection against government’s expropriation and the Heritage Foundation’s assessment of private property protection. The results suggest that while the property rights institutions have first order effects on long-run economic growth, investment and financial development, contracting institutions only matter for financial intermediation.

To summarise the literature review, we note that several measures of institutions have been produced and employed in empirical work. While there is no consensus on the most appropriate way to measure institutions, perception-based indices appear to dominate empirical work.

## **2.4. Empirical Methodology**

The literature survey has shown various attempts to quantify the structure and quality of various dimensions of institutions. This paper follows closely the methodology in Fedderke *et al* (2001) in constructing institutional indicators for Zimbabwe. The rationale for adopting this methodology is twofold. Firstly, by using formal legislation instead of political and economic outcomes for evaluating the status of institutions, the methodology safeguards against the problem pointed out by Glaeser *et al* (2004) of generating outcome-based indicators that do

not measure institutions as per the North (1990) view of institutions. Secondly, the resulting data set is comparable to the data set of South Africa in Fedderke *et al.* (2001).

In assessing the institutional environment, annual ratings of the status of rights is based exclusively on formal legislation. We note at the outset that such an exercise is not without methodological and conceptual difficulties.<sup>15</sup> Here we present the more prominent ones:

- i. The indices summarise a large amount of information across a range of distinct dimensions. Inevitably, any concrete state at any given point in time realizes fully defined rights in these distinct dimensions to differing degrees. Hence, the composite aggregate index will inevitably hide the important changes that take place within these dimensions.
- ii. The rating process may be affected by the prevalence of judge-specific method effects (Bollen and Paxton, 2000). These are perceptual biases of the judge making the subjective rating. Judge-specific methods effects may enter the rating at any of the three levels of the rating process namely, 1) the collection of the rating information, 2) the evaluation of the information and 3) the transformation of the evaluation into actual numerical values. The effect of such biases is to reduce the precision of the indicators.

The methodology employed for this study attempts to limit the subjectivity problem as far as possible by adopting the following rigorous steps as suggested by Bollen and Paxton (2000) and Fedderke *et al* (2001):

- i. First, the construction of the political freedoms and property rights indices will proceed by defining the relevant set of criteria to be used in evaluating the rights.

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<sup>15</sup> See Bollen (1990, 1992) for a detailed discussion of difficulties that emerge in the case of the construction of political (and property) rights indices.

The relevant set of criteria is informed by an appropriate theoretical conceptualisation of the rights or freedom of concern.

- ii. Guided by the ideal structure of the rights, sub-component variables of the index are identified.
- iii. Rating scales for the sub-components are set using a participatory approach, which involves experts (political scientists, political economists, property lawyers and social scientists) assigning weights to the different sub-components. The guiding principle is to assign heavier weights to sub-components that are more fundamental to the rights being evaluated.
- iv. Rating information is collected from various secondary sources. In this case, rating is based explicitly on enacted legislation.
- v. Once the sub-components and ratings scales have been determined and the rating information collected, the sub-components are rated. This is done using the Delphi technique which involves a team of experts assigning scores to each of the subcomponents on an annual basis. Ratings for any given year are done relative to the previous year's score. The sub-components are then aggregated into a composite additive score for each year.

This is an advance over the Fedderke *et al* (2001) methodology in which the individual sub-components of an index were only implicitly evaluated in building up the composite index. No explicit scores for each of the sub-components were provided. The advantage of rating sub-components individually is the reduction in the aggregation bias and it also enables an analysis of individual sub-components.

- vi. The last step involves a presentation of the indices to an independent panel of leading social scientists, political economists and lawyers who are well versed with issues in Zimbabwe. Adjustments to the measures are undertaken on the basis of the feedback. This is done in order to limit the perceptual biases that might arise from the Delphi sessions. In this study, the newly constructed indices were presented to various panels of experts at several local and regional conferences and one international conference

In the next two sections, we discuss the construction and interpretation of the political freedom and property rights indices for Zimbabwe. The indices cover the period 1946 to 2005.

## **2.5. Political Rights and Civil Liberties in Zimbabwe: 1946-2005**

### ***2.5.1 Identification of an Ideal State of Political Freedoms***

We note at the outset that there is a high level debate around the notion of political freedoms or democracy. This study makes no attempt to provide an exhaustive review of the debates. We adopt the three theoretical dimensions of a contemporary liberal democracy advanced by Jagers and Gurr (1995). The first dimension is institutionalised political competition accomplished through establishment of regular and meaningful competition among individuals and groups, an inclusive degree of political participation in the selection of leaders and policies. The second dimension is the existence of institutionalised constraints on the exercise of executive power. The final dimension is the guarantee of civil liberties to all citizens in their daily lives and in acts of political participation.

The three theoretical dimensions are operationalised by setting the following normative ideal criteria. This constitutes a nation state with a legal and constitutional structure that embodies the following features:

- i. An electoral system with a universal adult franchise in which there is no exclusion from participation on the grounds of race, colour, creed or sex and in which free and fair elections take place on a regular and precisely determined basis.
- ii. Constitutionally guaranteed freedoms of expression, political association and assembly.
- iii. Constitutionally guaranteed freedom of religion and freedom of choice with respect to personal matters such as vocation and sexual orientation.
- iv. Constitutional provisions to check and exclude the arbitrariness and discrimination in the application of laws.
- v. Legally entrenched freedom of movement and the right to reside in an area of choice within the territorial boundaries of the relevant polity.
- vi. A free press constrained only by the laws of libel and defamation and very precisely defined and limited constraint with respect to matters of 'national security'.
- vii. A bill of rights or some equivalent constitutionally robust mechanism to effectively protect the rights of individuals.
- viii. A division of power between the executive, judicial and legislative branches of government.

The above normative ideal criteria can also be equated to a “Rechtsstaat” in which fundamental justice exists and government authority is legitimately exercised only in accordance with written, publicly disclosed laws.

### **2.5.2. *Scaling and Rating Sub-components***

Guided by the normative ideal criteria, the rating instrument is based on a check list of 12 sub-components covering the two broad areas of political rights and civil liberties. Raw points are awarded to 8 of the sub-components using a 10-point scale. These include voting rights, freedom of association, freedom of assembly, freedom of expression, the extent of arbitrary executive power, independence of the judiciary and the legislature, government secrecy or indemnity and the due process of law. A score of 0 represents the enactment of legislation that completely limits the rights of interest, while a score of 10 shows the enactment of legislation that promotes or extends rights. These 8 categories yield a total of 80 raw points.

The remaining 4 categories are awarded raw points on a 0-5 scale. These include freedom of movement, academic freedom, religious freedom and a residual category that captures all discriminatory law that cannot be classified under any of the specific dimensions. These categories yield a total of 20 raw points. Summing across all categories gives 100 points as the highest number of points that can be awarded to the political rights and civil liberties indicator. The implied relative weighting reflects the importance of certain dimensions over others in the overall composite index. The legislation used to for rating is shown in appendix 1A. The final political freedom index is an addition across all the sub-components.

A score between 0 and 12 would be indicative of a de jure “totalitarian” state of the type exemplified by Nazi Germany and the Soviet Union during the Stalin years. A score between 13 and 37 would indicate a state with political and civil rights structure in which a very high degree of arbitrariness in state action is enabled by legislation as well as having highly

discriminatory or “exclusive” franchise arrangements. For a score between 38 and 50, the degree of arbitrariness in governmental action is more constrained.

A score between 51 and 74 would indicate considerable scope for “procedural justice” such as “due process” and reasonable scope for the exercise of choice in matters of political and social association, though such a system might contain some formal discriminatory provisions and constraints on personal liberty as well as restrictive franchise arrangements. A score between 75 and 87 would indicate a political system with entrenched procedural justice and freedom of association and assembly, subject to relatively few constraints. This leaves the 88 to 100 range for fully developed liberal democracy with recognition of third generation rights.

### **2.5.3. Outcomes of Rating**

Some caveats need to be issued at the outset. First, for the purposes of this measure, no attempt is made to establish the degree of “fit” between the formal specification of rights and freedoms within legislation and the likelihood that such legislation would be acted upon. Thus, it is irrelevant to this indicator whether or not any of the statutes were actually applied.

Second, unlike the Freedom House indexes, formally specified political rights and formally specified civil liberties are not separated. As such, the measure is based on the global interpretation of the state of the political rights and civil liberties in each year under consideration.

Third, in covering a long time period, as we have done, issues of commensurability may arise. This is because over the period 1945 to 2005, Zimbabwe went through various complex phases of constitutional arrangements and legal systems making it impossible to assume a unified political system over time. During the period under review, at least six distinct constitutional dispensations can be identified:



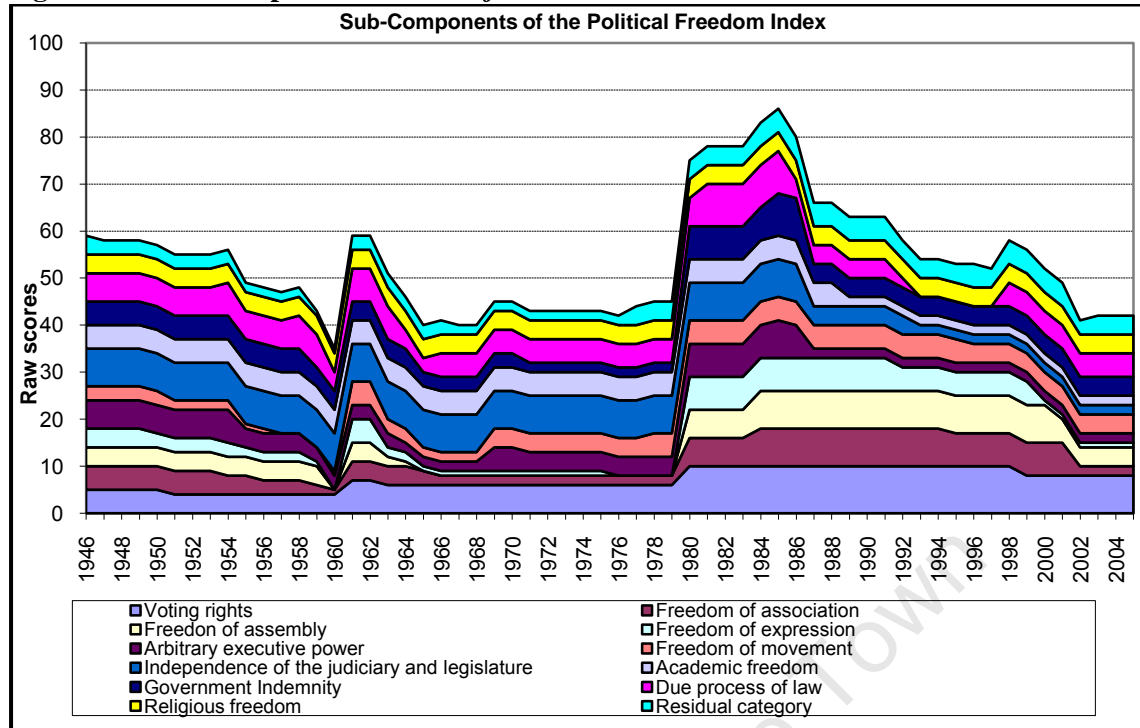
- i. The first constitutional dispensation covered the period 1945 to 1960 during which the 1923 constitution was in place. The 1923 constitution resulted in Britain granting internal self-government to the white population in Southern Rhodesia.<sup>16</sup> This saw the inauguration of a unicameral legislative assembly elected by a non-racial franchise effectively limited to whites by way of high income and property requirements.
- ii. The second constitutional dispensation occurred from 1961 to 1964 with the adoption of a new constitution in 1961. It is during this phase that Britain's reserved powers over local legislation were completely relinquished and replaced by a bill of rights in the new constitution.
- iii. The third constitutional dispensation was from 1965 to 1968 when a new constitution was promulgated after the Unilateral Declaration of Independence from Britain by the local white settlers.
- iv. The fourth constitutional dispensation was a period of bicameralism and a voters' roll defined on an explicitly racial basis extending from 1969 to 1978.
- v. The fifth constitutional dispensation was that of the 1979 constitution produced as a result of an internal settlement agreement between the Smith government and the conservative Black Nationalist Parties.
- vi. The final constitutional dispensation is the current constitution adopted in 1980 as a result of the Lancaster House Peace Agreement which resulted in the transfer of political power from the whites to the blacks.

Figure 2.2 plots the sub-components of the political freedom index. The graph is cumulative showing how each of the 12 sub-components contributes to the overall index. The composite index is sketched out in figure 2.3.

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<sup>16</sup> Zimbabwe's name prior to independence.

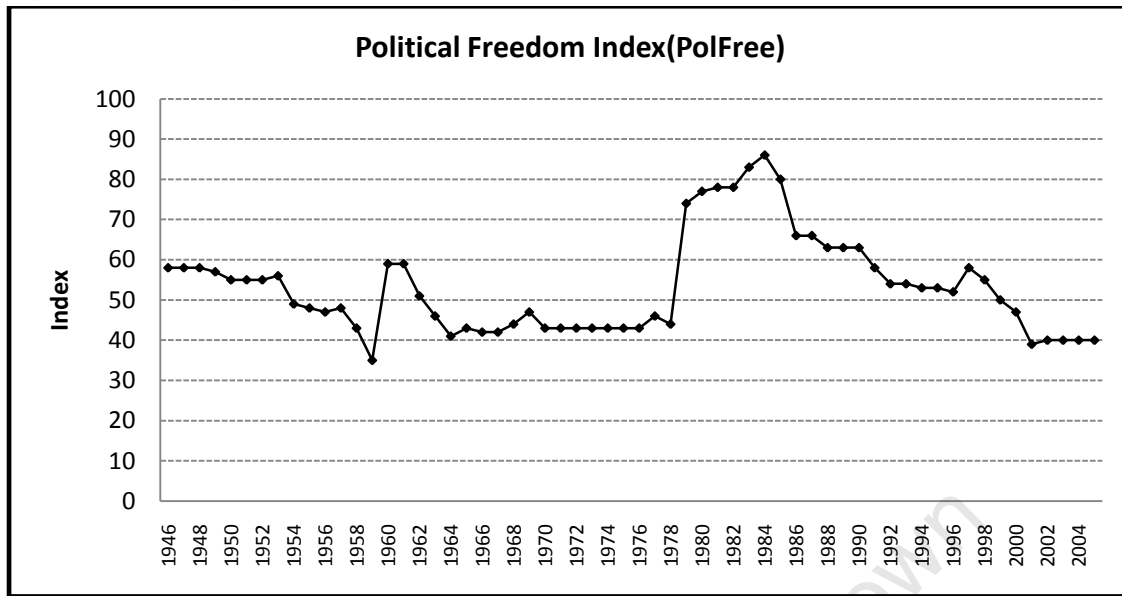
**Figure 2.2: Sub-Components of the *de jure* Political Freedom Index**



#### **2.5.4. Interpretations of the Political Freedom Index**

It is evident from figure 2.3 that the country experienced a decline in the quality of political freedoms from its base year in 1946 up to 1960. This is expected since the mid-1940s to late 1950s experienced a steady stream of legislation that impinged on fundamental political rights and civil liberties of the native Africans. Such an institutional framework reflected the desire of the White elite to prevent both political and economic competition from the Africans (Blacks). Specifically, the electoral franchise was severely limited to the Europeans (whites) through the provisions of the Electoral Act of 1951 specifying high income and property requirements, which in reality were out of reach of the Black majority. Freedoms of association, assembly, expression, movement and the due process of law were severely restricted during this time through the enactment of legislation such as the Native (Urban Areas) Accommodation and Registration Act of 1951, the Municipal Act of 1953, the Public Order Act of 1955 and the Native Registration and Identification Act of 1957. This legislation was used by the government to stifle political dissent and to limit personal freedoms.

**Figure 2.3: The *de jure* Political Freedom Index, 1946 to 2005**



There is a sharp dwindling of formal rights between 1959 and 1960. This follows enactment of “security laws” which severely violated fundamental rights. Examples of such legislation include, the Preventive Detention (Temporary) Provisions Act (1959), Public Order Amendment Act (1959), the Unlawful Organizations Act (1959), the Vagrancy Act (1960), Emergency Powers Act (1960) and the Law and Order (Maintenance) Act ( 1960). These Acts gave the government wide discretionary powers to arrest and detain without trial and to restrict assembling for political reasons. Further constraints on the freedoms of movement, association and assembly during this two-year period were found in the provisions of the Industrial Conciliation Act of 1959.

In the early 1960s, the ruling United Federal Party (UFP) recognised that the political and economic exclusion of Africans was not consistent with its goal of industrialisation. The institutional framework kept African average incomes at persistently low levels which in turn led to very low internal demand. Low demand was in turn detrimental to the realisation of a sustainable internally-driven industrialisation process. This internal inconsistency led to the liberal reforms of 1961 aimed at political and economical advancement of the Africans.

The abrupt improvement of the political freedoms in 1961 was due to the legislative reforms in the 1961 constitution which sought to increase the enfranchisement of Africans and to introduce minimum representation for Blacks in the House of Assembly. The constitution introduced the first ever entrenched bill of rights, while 1961 also saw the repulsion of the most discriminatory laws such as the Immorality and Indecency Suppression Act. However, the attempted institutional transformation was abortive because in 1962, the UFP lost power to the conservative Rhodesian Front (RF) which had the backing of white workers, agrarian and petty bourgeoisie.

The future of African political and economic advancement became bleak when the conservative RF came into power. The immediate effect was an increase in acts of insurgency by Black Nationalist movements. As the government came to grips with the state of increasing political dissent, formal rights started to decline from their seemingly “better” state in 1961 through the enactment of repressive legislation. This phenomenon continued throughout the 1960s. After the RF government led by Smith, unilaterally declared independence from the colonial power in 1965, another constitution was promulgated. This gave the government wide discretionary power to declare states of emergency, to arrest and detain opponents without trial and to censor publications. Compared to the ideal state, this represented a serious violation of fundamental rights. The situation continued to worsen as the liberation war intensified and government became determined to restore socio-political stability.

The inception of independence in 1980 marked the beginning of an era in which there was a new dispensation in the structure of formal political rights. The distinct improvement in 1980 followed the enactment of the Employment Act which repealed a number of discriminatory laws such as the African Juveniles Employment Act, the African Labour regulations Act, the Foreign Migratory Labour as well as the Masters and Servants Act. The Public Service

Commission Act of the same year removed racial restrictions to entry into the public service. The major improvement was also an outcome of the entrenched bill of rights and provisions for the immediate enfranchisement of all African adults contained in the 1980 Lancaster House Constitution. Further but steady improvements were realised as more discriminatory laws were repealed in the years that followed.

The situation however started deteriorating again in 1985 as a result of the continuous enactment of legislation allowing for arbitrary state action at the expense of the individual rights. The key acts contributing to this trend between 1985 and 1992 were the Presidential Powers (Temporary Measures) Act of 1986, the Constitutional Amendment No. 7, No. 9 and No. 10. The Constitutional Amendment Act of 1993 which provided for the imposition of a death penalty resulted in yet another sharp fall in the level of rights. The subsequent acute worsening in the formal rights in 2002 was a result of the enactment of the Public Order and Security Act, the Access to Information and Protection of Privacy Act, Labour Relations Amendment Act and the Presidential Powers (Temporary Measure) Election Act Modification Notice. Together, these acts greatly limited the electoral franchise and the freedom of expression and association.

## **2.6. Property Rights in Zimbabwe**

The property rights index relates to immovable property, with a particular focus on productive land and land resources. The rationale for focusing on land and land resources is twofold. Firstly, the Zimbabwean economy is primarily an agro-mining economy implying that land plays a huge role in facilitating economic transactions. Secondly, we follow earlier work done on South Africa.<sup>17</sup> This will make it possible to make meaningful comparisons between the states of property rights in South Africa and Zimbabwe.

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<sup>17</sup> Fedderke, de Kadt and Luiz (2001).

The methodology again follows an initial identification of an ideal set of rights. Zimbabwe's realisation of this ideal set of rights is then examined with reference to the most important pieces of legislation affecting these rights. The resulting index corresponds to the procedural rules constraining state and elite's expropriation and not outcomes of whether there is actual expropriation.

### ***2.6.1. Identification of an Ideal State of Property Rights***

Although there are variations in both philosophical and legal spheres of what constitutes property rights, we follow the lead of Waldron (1988) who used Honore's definition of "full liberal ownership". Honore (1961) sets out eleven "standard incidents" or common features of ownership which comprise:

- i. The right to possess.
- ii. The right to use.
- iii. The right to manage.
- iv. The right to income.
- v. The right to the capital value.
- vi. The right to security against expropriation.
- vii. The power to transmit.
- viii. The lack of any term on the possession of these rights.
- ix. A duty to refrain from harmful use.
- x. Certain judgments against the owner may be executed on the object.
- xi. Incident of residuary.

Waldron (1988) noted that Honore's list of standard incidents only provides common features of ownership. In his work, Waldron (1988) argued that the prohibition on harmful use is better regarded as a general background constraint on action than specific rules of private property

and thus should be ruled out. Furthermore, for the purposes of this study, some dimensions are eliminated. The right to income is incorporated into the right to use the property as the owner sees fit. The absence of term and incident of residuary shall be excluded on the basis that these dimensions do not significantly affect the transaction costs of carrying out economic activities. Thus the “ideal” set of property rights will constitute the following seven incidents:

- i. The right to possess,
- ii. The right to use,
- iii. The right to manage,
- iv. The right to capital,
- v. The right to security,
- vi. The power to transmit.
- vii. Liability to execution.

### ***2.6.2. Scaling and Rating Sub-components***

The scale for the property rights index also ranges from 0 to 100. The full existence of all seven of the above incidents in the above definition are used as the ideal set of property rights and would be equivalent to 100 points. Any variation from this would thus correspond to a less than perfect score. The complete exclusion of these rights or incidents would result in a score of zero for a society.

Raw points are awarded to the various sub-components using varying scales. The right to possess, which we consider as the most critical dimension of ownership, has a scale ranging from 0 to 20. A score of zero is an indication of the enactment of legislation that curtails ownership rights while the opposite is true for a score of 20. The right to use, the right to capital, the right to security and the right to transmit are scaled from 0 to 15, where a score of

15 is an indication of the enactment of legislation that extends the right of interest, where as the opposite holds for a score of 0. The remaining two incidents are scaled from 0 to 10. Summing across all incidents gives a total score of 100 points, which coincides with the ideal set of property rights. The implied relative weights again show the relative importance of certain sub-components in the composite indicator.

### **2.6.3. Outcomes of Rating**

Because of the colonial history in Zimbabwe, the construction of a realistic property rights index presents further methodological difficulties. The difficulties arise because restrictions on rights to immovable property especially land, were executed along racial lines during the colonial era (up to 1980). During this period, rights over land held by the Africans were not of the same character as the rights enjoyed by the Whites and international capital in respect of the land which they were able to purchase (Palley, 1966).

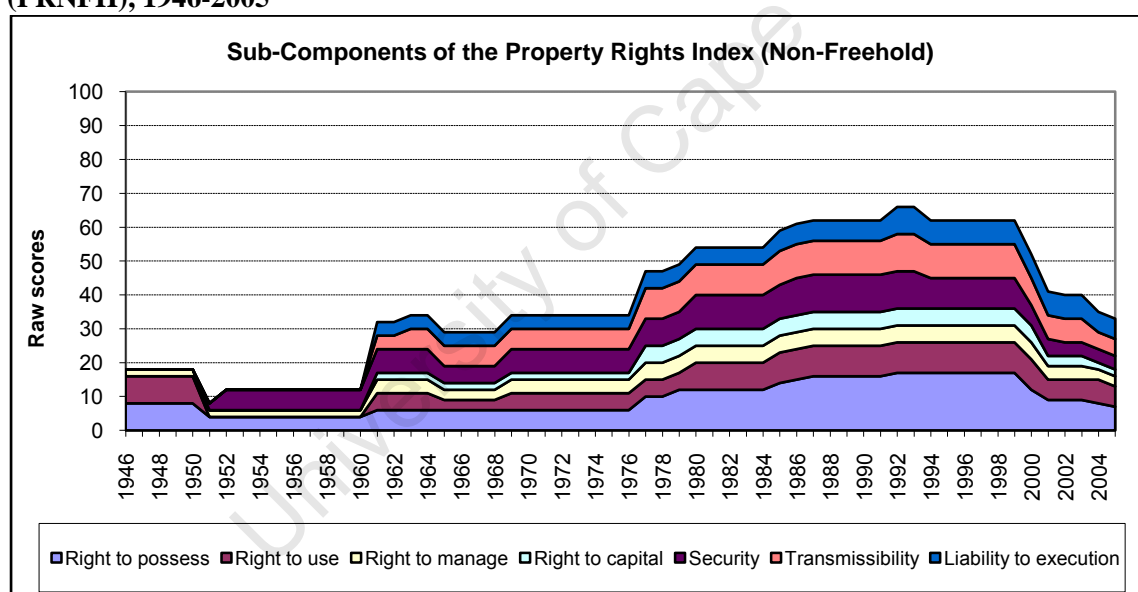
The post-independence land ownership rights are largely derived from the colonial legacy of dualism in land ownership. Land ownership rights are expressed in the four main systems of land tenure, namely freehold (private), state land, communal and leasehold (resettlement) systems. The freehold (private) tenure system is prevalent in the commercial farming sector that is predominantly owned by white commercial farmers and transnational companies. The other forms of tenure (communal and resettlements), which are non-freehold primarily apply to land owned by the Blacks. With such a dualistic tenure system, a single property rights indicator would not reflect the limitations or extensions to property rights experienced by different sectors of the country. Fedderke *et al* (2001) faced the same constraint in their study on South Africa. They resolved this limitation by producing a single property rights index implicitly weighted by the availability of land to the relevant racial groups and by the population distribution between different racial groupings. Our study will address this constraint by evaluating the security of rights in the freehold and non-freehold tenure systems



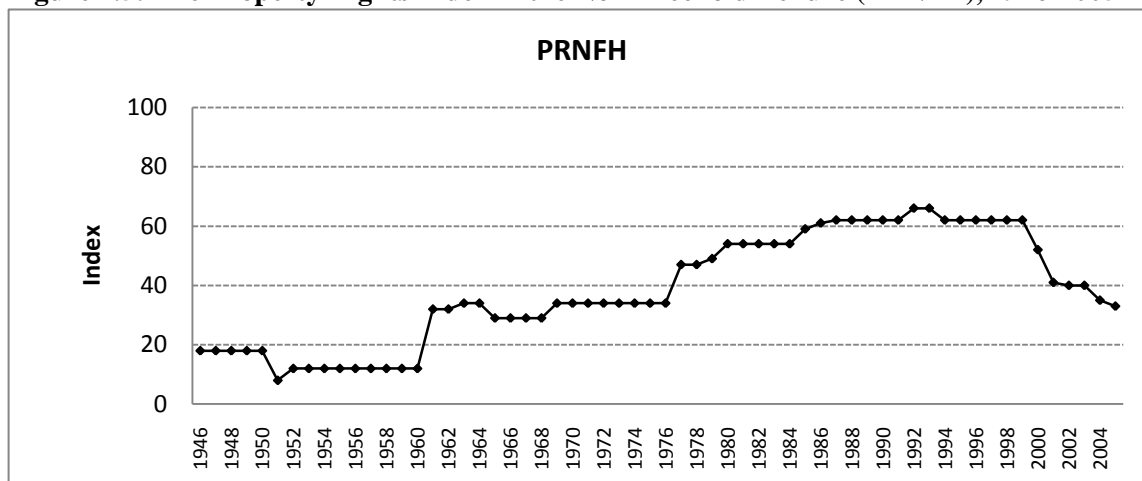
separately. The resulting two de jure property right indices will then be combined into a composite property rights index using two different weighting systems.

The index denoted by PRFH measures the status of formal property rights in the freehold land tenure system whereas PRNFH measures the status of formal property rights in the non-freehold land tenure system. Figure 2.4 plots the sub-components of PRNFH, while the aggregate PRNFH index is shown in figure 2.5. The sub-components of the index of property rights in the freehold tenure system (PRFH) are depicted in figure 2.6, whereas the resulting aggregate index is shown in figure 2.7. The rating information for the property rights indices is presented in appendix 1B.

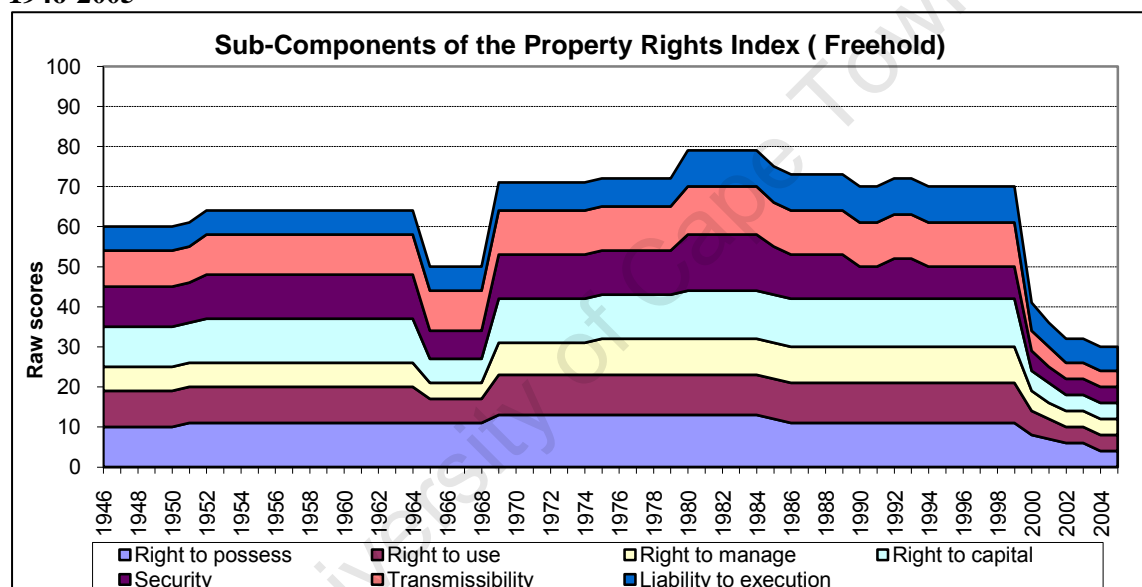
**Figure 2.4: Sub-Components of the Property Rights Index in the Non-Freehold Tenure (PRNFH), 1946-2005**



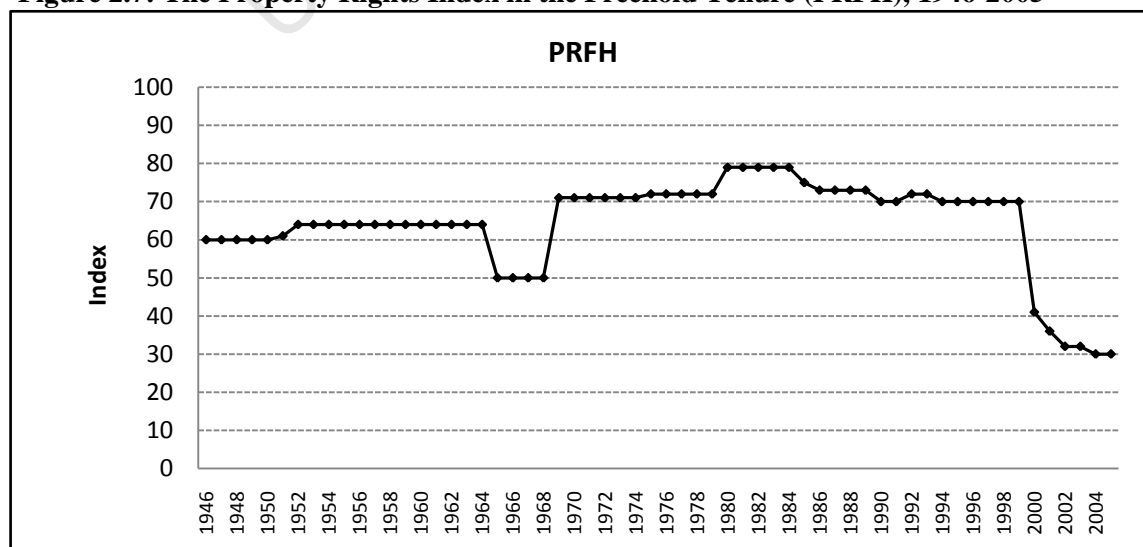
**Figure 2.5: The Property Rights Index in the Non-Freehold Tenure (PRNFH), 1946-2005**



**Figure 2.6: Sub-Components of the Property Rights Index in the Freehold Tenure (PRFH), 1946-2005**

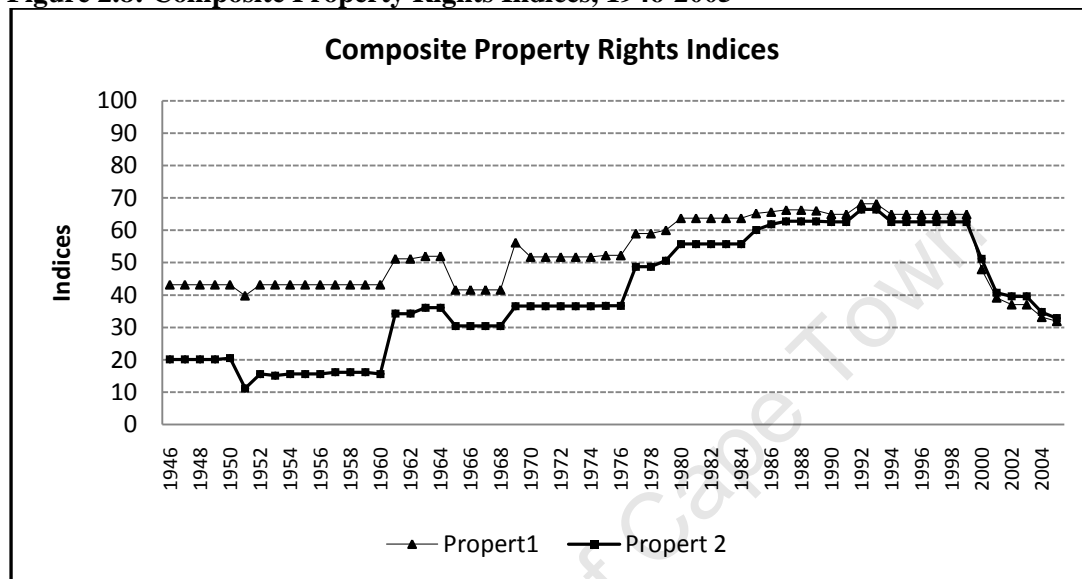


**Figure 2.7: The Property Rights Index in the Freehold Tenure (PRFH), 1946-2005**



The two indices are weighted into a composite property rights index first by using the proportions of land available to the different tenure systems, and then using population distribution between different racial groupings. Figure 2.8 presents the property rights indices resulting from the two weighting methods.

**Figure 2.8: Composite Property Rights Indices, 1946-2005**



#### **2.6.4. Interpretations of the Property Rights Index**

Changes in the institutional framework prior to independence mainly reflected changes to laws regulating the non-freehold land tenure systems. The colonial period was characterised by an entrenched and stable institutional framework for the freehold tenure systems in which ownership was dominated by the whites and transnational capital. In the post-independence era, especially after 1990, there was however increased turbulence in the formal laws regulating privately held land regardless of the origin or race of owners.

The composite index Propert1 based on the proportions of land available to the different tenures places almost equal weights to the two indices, PRFH and PRNFH. It therefore fails to capture the inequalities across different races in accessing land and land resources. In contrast, the index Propert2 which is weighted on the basis of racial proportions, attempts to factor in

the racial misalignments in the institutional framework for the ownership of land and land resources.

For purposes of tracking the overall structure of formal property rights, we use *Propert2*, which we denote by *propert* in the rest of the study. Our choice of this composite property rights index is based on the Acemoglu *et al* (2004) argument that good economic institutions are those that provide security of property rights and relatively equal access to economic resources to a broad cross-section of the society and not a minority.

Now we turn to the interpretation of the property rights index. The physical and qualitative division of land between Blacks and Whites was legalised initially through the Land Apportionment Acts of 1930 and 1941. The provisions of this act allowed the government to partition the land into European areas, African areas (Tribal Trust Lands), an unreserved area and national land. The tenure systems as well as scale and quality of land were lopsided in favour of the whites and foreign firms.

The deterioration of the status of property rights in 1951 resulted from the enactment of the Land Husbandry Act. The act made special provisions allowing the government to remove Africans from the Tribal Trust Lands if the need arose. It also prescribed stringent measures to force African farmers to de-stock their cattle and modify land tenure practices. In terms of individuals' property rights, this constitutes a serious restriction on the right to security from government expropriation and the ability of an individual to use the property.

The improvement to the formal rights in 1961 is a result of the adoption of the 1961 constitution which gave the legislature power to amend the Land Apportionment Act and to make provisions for opening up land to Blacks. In the same year, the Land Apportionment was amended to create a category of land open to all races. In 1969, the Land Tenure Act was passed to repeal the Land Apportionment Act, which was the pillar of unequal access to

immovable property by different races. Although more land was set aside for black ownership, this was done within a framework that sought to further formalise dualism of land ownership.

Independence in 1980 saw the inception of the Lancaster House Constitution. It provided for the constitutional protection of all private property. The constitution also prescribed that the acquisition of private property by the government should be on a “willing buyer, willing seller” basis and that compensation for the acquired land should be at market price, promptly paid in the currency of the land owner’s choice. One perception of these ingrained provisions of the Lancaster House Constitution was that they served to protect existing rights and interests in land belonging mainly to white commercial farmers and some transnational companies. In contrast, another perspective is that these provisions imposed constraints on the government’s ability to enhance access of the poor and other marginalised groups to land and land resources.

Beginning in 1985 up to the mid-1990s, the government made several changes to the legal framework directed towards addressing the historically unbalanced access to immovable property. Such changes were contained in the Constitution of Zimbabwe Amendment (No 5) of 1985 and (No 11) of 1990, the Mines and Mineral Act of 1987 and Land Acquisition Act of 1985, re-enacted in 1992 with some amendments. These changes were implemented within the framework of fair compensation and thus posed no serious threat to private property.

1994 marks the beginning of an era in which formal property rights started deteriorating. This is because of the constitutional amendments removing the constitutional protection of compensation for land. The biggest blow came in 2000, when the government amended the constitution for the sixteenth time removing government’s obligation to pay compensation to the owners of land acquired for land reform process shifting the onus to Britain, the former

colonial power. Further deteriorations came in the subsequent years as government introduced more amendments to legislation that were aimed at limiting the jurisdiction of the courts over the land issue.

## **2.7. Political Instability in Zimbabwe: 1950-2005**

### **2.7.1. Conceptual Framework**

The notion of instability adopted in this study captures the idea of socio-political unrests and disturbances. The reasoning being that when socio-political instability reaches high levels, it disrupts market activities which in turn affects productivity and therefore returns to investment (Alesina and Perroti, 1996). Moreover, political instability may result in bad economic policy formulation either because (a) governments choose not to improve the efficiency of policy-making, since they anticipate an imminent loss of power,<sup>18</sup> or (b) because the unstable political systems results in weak governments that are unable to change and improve policy formulation. However Olson (1982) argued that very high levels of political instability may be desirable, since it destroys the hold on the state exercised by powerful interest groups who are more concerned with the imposition and maintenance of redistributive policies than with sound growth enhancing economic policy.

The political instability index is constructed on the basis of official and unofficial data placed in a weighted composite index of instability in accordance with alternative weights. The choice of the sub-components to include in the index is informed by past literature as well as availability of data. The political instability series contains the following sub-components:

- i. The number of declarations and renewals of states of emergencies per year.
- ii. The number of publications banned per year.

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<sup>18</sup> See Olson (1993).

- iii. The number of politically motivated arrests per year.
- iv. The number of reported cases of politically-related property damages per year.
- v. The number of incidences of war-related armed attacks on the general public per year.

### **2.7.2. Description of Variables and Data Sources**

Information on the number of declarations and renewal of states of emergency and the number of publications banned is obtained from Ramussen and Rubert (1990, 2001). Renewals of states of emergency are considered against the background of continuous states of emergency between 1965 and 1990. Information on the number of politically motivated arrests was obtained mainly from archival material ranging from newspapers to political magazines.<sup>19</sup> The Catholic Commission for Justice and Peace report on the Matabeleland political unrests in the 1980s provided useful information on the disappearances and detentions that occurred during this time. Although it is acknowledged that accuracy of the information is questionable, the figures give a picture of when political violence was at its peak. The property damages taken into account are those associated with political violence. The source of such information is the Zimbabwe Human Rights Non-Governmental Organisation (NGO) Forum political violence reports and the Catholic Commission for Justice and Peace reports. The number of armed attacks data is obtained from Alesina *et al* (1996).

### **2.7.3. Interpretations of the political Instability Index**

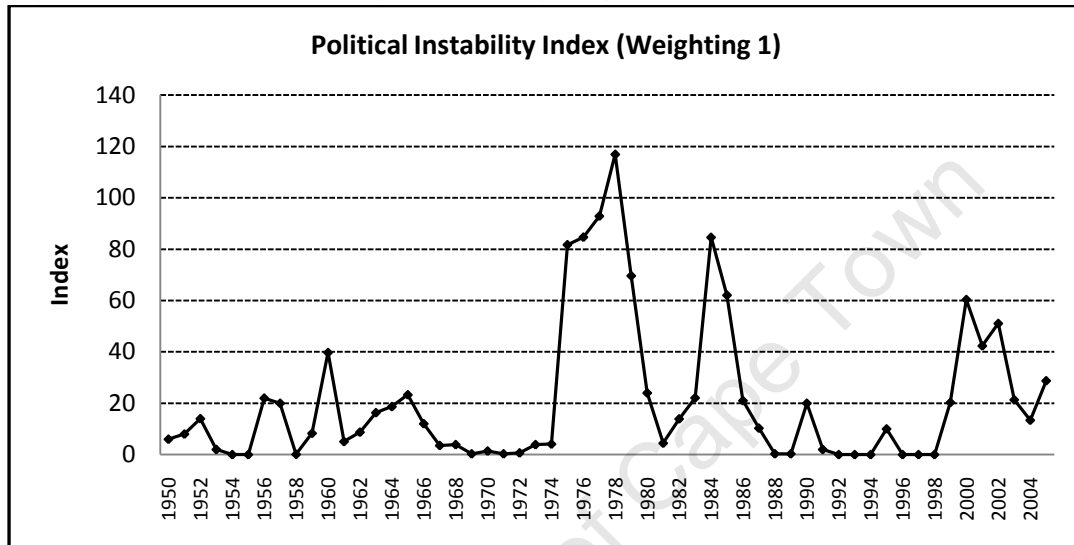
There is no a priori standard for weighting the sub-components above into a composite political instability index. Given this uncertainty surrounding the appropriate weighting, we use different weightings. Figures 2.9, 2.10 and 2.11 present the results of the different

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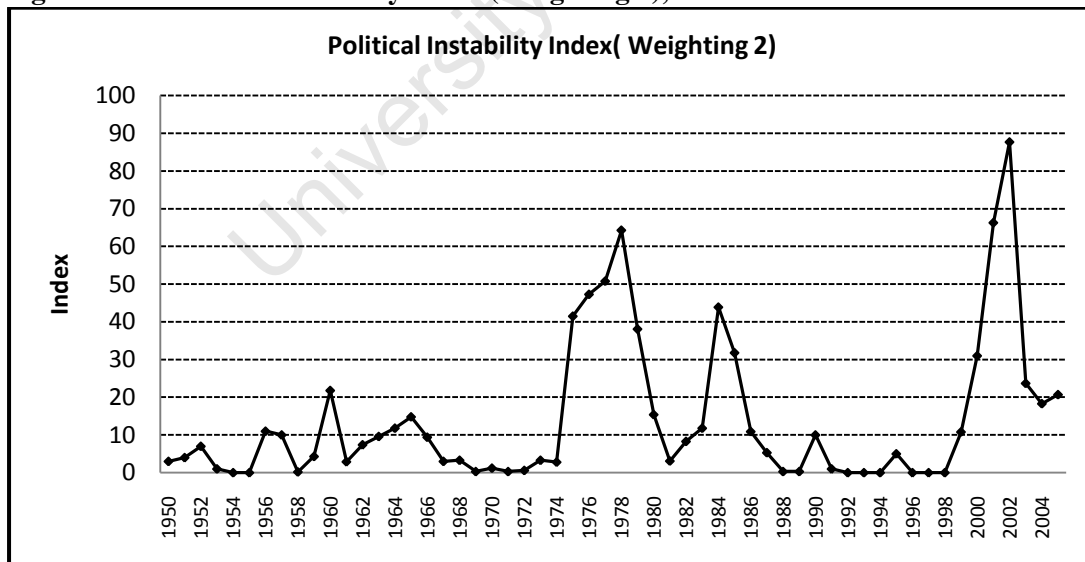
<sup>19</sup> Research assistants were hired from the Political Science Department at the University of Zimbabwe to compile the data.

weightings. Our expectation is that weighting 1 in figure 2.9, which places more weight on war related political violence, closely depicts the variation of the level of social and political unrests over time in Zimbabwe. According to figure 2.9, peaks in political and social instability occurred in 1960, 1965, the period 1975 to 1979, the mid-1980s and the period 2000 to 2003.

**Figure 2.9: Political Instability Index (Weighting 1), 1950-2005**

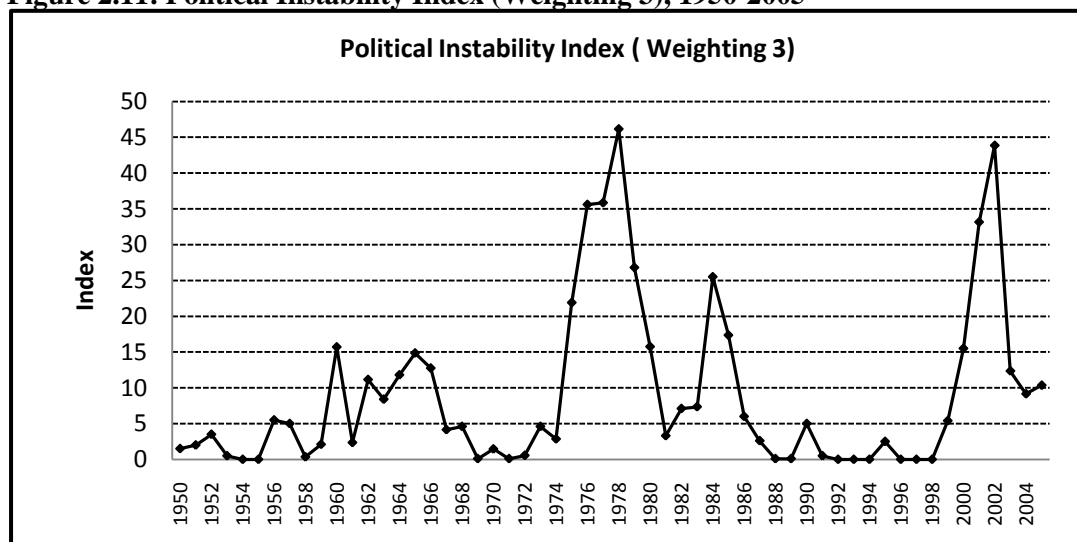


**Figure 2.10: Political Instability Index (Weighting 2), 1950-2005**





**Figure 2.11: Political Instability Index (Weighting 3), 1950-2005**



Although the formation of a number of African nationalist political parties opposed to the White economic and political domination started in the 1950s, the real warfare only began in 1960 intensifying in the mid-1970s up to the time of independence in 1980. In 1980, acts of political violence drastically fell with the end of the liberation war. However, the political environment remained very fragile because of the inherent conflicts between the two African nationalist parties that participated in the liberation war. As a result of the conflict between these two political parties, political instability increased between the early-1980s and 1987. After the unification of these two parties in 1987, the environment stabilised again. The rest of the 1990s were relatively stable except for minimum levels of socio-political instability during election times and workers' strikes.

However, in 1999, political instability began to increase again. Two major factors contributing to the increased political instability can be identified. Firstly, the argumentation of the civil society opposed to government policy led to the formation of the National Constitutional Assembly (NCA), a coalition of NGOs, academics and university students. A new political party, the Movement for Democratic Change (MDC) was also formed in 1999. The NCA successfully campaigned for the rejection of a government-led constitutional change in the 1999 Constitutional Referendum. The government's loss in the 1999

Constitutional Referendum and the desire to win the 2000 parliamentary elections led to a violent crackdown on the civil society coalition and the MDC. Secondly, violent and unconstitutional farm invasions also contributed to the beginning of yet another period of high levels of socio-political unrests.

## 2.8. Comparative Analysis

### 2.8.1. Comparison of the new Indices with existing Institutional Indices

To check the efficacy of the new series of institutional indices constructed in this chapter, we compute correlations between our indices and other widely used existing empirical indices of political freedoms and property rights. Table 2.2 presents the non-parametric spearman correlation coefficients.

**Table 2.2: Spearman Correlation Coefficients between Institutional Indices**

	PolFree	Political Freedom (FH)	Civil Liberties (FH)	PROPERT	PROPERT (FI)	Political Instability
PolFree	1.000					
Political Freedom (FH)	-0.7612*	1.000				
Civil Liberties(FH)	0.2866	0.2190	1.000			
Vanhanen DI	0.8232*					
PROPERT	0.2761	-0.1898	0.4600*	1.000		
PROPERT (FI)	0.0275	-0.0946	-0.4808*	0.7427**	1.000	
PROPERT (HF)				0.8212*		
Political Instability	0.0879	0.0075	0.4234*	-0.7184**	-0.5731**	1.000

Notes:\* denotes significance at 5%, \*\* denotes significance at 1% level.

We compare our political freedom indicator (PolFree) to the Freedom House (FH) indices of political freedom and civil liberties and the Vanhanen (2000) Democratisation Index (DI). The new index PolFree runs from 1946 to 2005. The Freedom House indices are perception-based and available for the period 1972 to 2005. The Vanhanen (2000) democratisation index is an objective-based measure which combines several variables such as voter turn out and the percentage of parliamentary seats taken by smaller opposition political parties. For Zimbabwe, the Vanhanen democratisation index covers the period 1980 to 2005. The PolFree index correlates highly with the Freedom House political freedom index and the Vanhanen

democratisation index with correlation coefficients of -0.76 and 0.89 respectively (see table 2.2). However, the correlation between PolFree and the Freedom House civil liberties index is very low and insignificant.

The property rights index is compared to the Fraser Institute (FI) and the Heritage foundation (HF) indices of property rights. Our composite property rights index (Propert) has a 0.74 correlation with the Fraser Institute property rights index and a 0.82 correlation with the Heritage Foundation property rights index. While, a perfect measurement precision is not possible from our procedure, the high correlations between our indicators and other existing indicators raise our confidence on the efficacy of the new set of institutional indices.

We now turn to the relationship between political freedom and property rights. There is a low and insignificant correlation of 0.27 between the new indices PolFree and Propert. This confirms the divisibility of the two forms of rights. With regards to the relationship between political instability and the rights indices, it is shown that political instability bonds well with property rights with a significant correlation of -0.72. However, political instability has a very low and insignificant correlation of 0.08 with political freedom.

### **2.8.2. Comparisons of Zimbabwe and South Africa's formal rights**

In this section we compare the formal institutional frameworks in South Africa and Zimbabwe. Historically, the two countries' legal frameworks were closely linked implying a close tie in their formal institutional structures (Sprack 1974). In his analysis of the relationship between the legal frameworks in South Africa and Rhodesia (now Zimbabwe), Sprack (1974) referred to Rhodesia as "*South Africa's sixth province*" just to demonstrate how well connected the legal frameworks of the two countries were. Given these close historical links, our analysis seeks to unveil how this association changed over time.

Figures 2.12 and 2.13 compare the status of formal political freedom and property rights in Zimbabwe and South Africa. Data on the South African indicators is obtained from Fedderke *et al.* (2001). While the status of political freedoms in the two countries was on par in the mid-1940s, the situation deteriorated more rapidly in South Africa than in Zimbabwe. With the attainment of independence in Zimbabwe in 1980, the Lancaster House constitution was adopted and discriminatory laws were repealed. This created an even wider gap between the two countries.

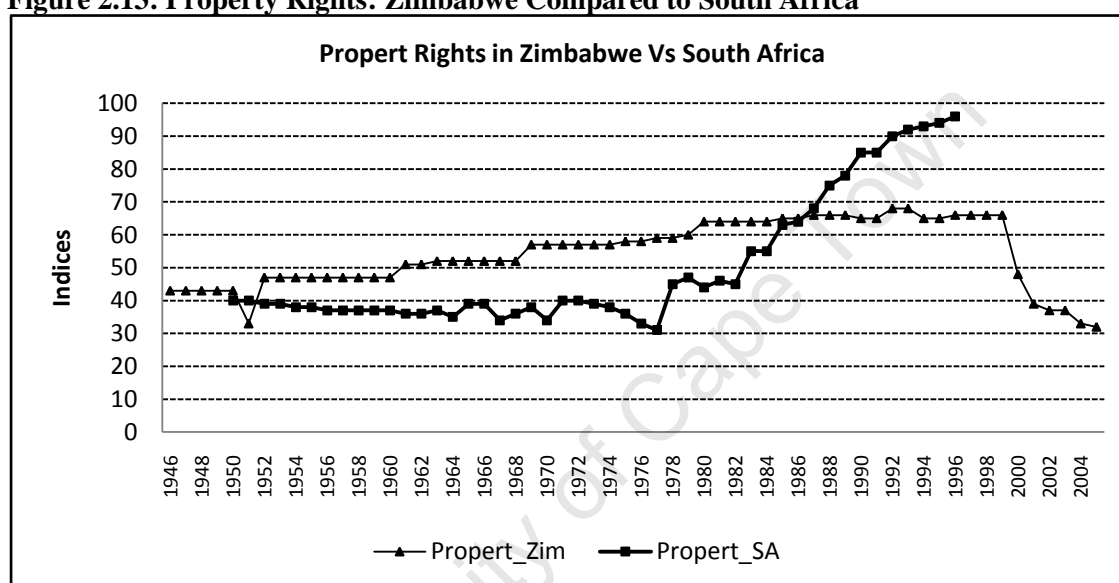
The situation remained unchanged until 1990 when the Apartheid regime in South Africa came under threat and was eventually abolished in 1994. When South Africa became a democratic nation in 1994, fundamental justice and rule of law were made accessible to all races. However, political freedom in Zimbabwe has been deteriorating since the 1990s mainly due to the continued use of legislation as a tool to suppress political dissent as well as personal freedoms.

**Figure 2.12: Political Freedoms: Zimbabwe Compared to South Africa**



Figure 2.13 compares the property rights indices in Zimbabwe and South Africa. It is clear that although Zimbabwe's ratings were better compared to South Africa's rating up to the mid-1980s, the situation changed after the mid-1980s. Whilst *de jure* property rights in South Africa continued to improve since 1976, those in Zimbabwe remained stagnant only, marginally improving in some years until 1985, when the ratings in South Africa began to surpass those in Zimbabwe.

**Figure 2.13: Property Rights: Zimbabwe Compared to South Africa**



## 2.9. Conclusion

The major purpose of the chapter was to assemble a new dataset of institutional indicators for Zimbabwe that are usable in country-specific time-series. This was achieved by the construction of the following:

- i. A *de jure* political freedom index for the period 1946 to 2005.
- ii. A *de jure* property rights index for the period 1946 to 2005.
- iii. A *de facto* political instability index for the period 1950 to 2005.

The study employed the Fedderke *et al* (2001) Delphi technique in the construction of the two *de jure* indices. The process involved a team of experts rating the status of property rights and

political freedom on an annual basis after observing the formal laws and regulations enacted by the government in each year. The ratings were however not influenced by the extent to which these laws are enforced. Some methodological improvements over the Fedderke *et al* (2001) empirical methodology were achieved by scoring sub-components of the indices individually. This has the advantage of reducing aggregation biases as well as enabling the analysis of individual sub-components.

The *de facto* political instability index was constructed by combining several objective measures of political instability into a composite index using some weighting system. The analysis of the new data set raises some concrete issues.

The first issue is that the study established a low correlation between the new property rights index and the new political freedom index. This finding implies a high degree of divisibility between the two forms of rights. The independency of the two would imply that even autocratic political regimes may accompany sound and secure property rights.

The second issue is the relationship between the *de facto* political instability index and the *de jure* political freedom and property rights indices. It was found that political instability correlates well with property rights but has no significant relationship with political freedom. Implications are that the political elite should ensure an institutional framework which safeguards the property rights for the broad cross-section of the society and not just for a minority so as to achieve political stability.

Third, the new indicators correlate fairly well with some existing commonly used institutional indices thus raising our confidence about the validity of our new measures. The new political freedom index correlates well with the Freedom House political freedom index and the Vanhanen democratisation index. The new property rights index correlates well with the Heritage Foundation and Fraiser Institute indices of property rights. However, our new

indices are available for a relatively longer time period allowing confidence in their use to address long-run issues.

Fourth, the study also provides a comparative analysis of the structure of formal rights between South Africa and Zimbabwe. There seems to surface the conclusion that while the two countries might have had close historical ties, both have travelled different paths with regards to the development in their political and property rights institutions.

University of Cape Town

## Chapter 3

### 3. Foreign Direct Investment in Zimbabwe: The Role of Property

#### Rights

#### 3.1 Introduction

Most African countries face a shortage of funds to meet their investment needs. This is attributed to the low levels of private savings that these countries face. The United Nations Conference on Trade and Development (UNCTAD) (2000) estimated that, in order to achieve a sustainable economic growth rate of 6% per annum, the domestic investment rates in the Sub-Saharan Africa (SSA) region have to increase up to about 25% from the levels reached during the 1990s of less than 20%. Foreign capital inflows are therefore considered important for plugging the domestic resource gap in these countries.<sup>20</sup>

It is then often advised that developing and emerging economies should direct their efforts towards attracting FDI, which is seen as an important vehicle of technical progress. By introducing advanced technology, management practices and improved production techniques, it is argued that FDI can improve productivity (Borensztein *et al.* 1998). Furthermore, FDI is viewed as relatively stable during financial crises when compared to short-term foreign capital inflows (Prasad *et al.* 2003). The growth-enhancing effects of FDI, however, depend on the absorptive capacity of the recipient country, which in turn depends on educational levels and the development of the financial markets, among other factors.<sup>21</sup>

An important related question is what are the key determinants of FDI in developing countries and SSA, in particular? While the macroeconomic determinants of FDI to developing

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<sup>20</sup> See for example the dual gap analysis in Chenery and Bruno (1962) and Chenery and Strout (1966).

<sup>21</sup> See for example Borensztein *et al* (1998).



countries have been analysed to a considerable extent,<sup>22</sup> there has been a recent shift of focus to the role of the host country's institutional environment. The FDI-institutions link debate borrows from the broader analysis of the impact of institutions on economic development. The New Institutional Economist (NIE) literature asserts that rules and regulations, which define and enforce property rights, enhance economic performance because they reduce transaction costs and uncertainty. In line with this argument, Benassy-Quere *et al* (2007) proposed that institutions affect FDI through influencing productivity prospects, investment-related transaction costs and uncertainty.

Zimbabwe presents an interesting case to test the role of property rights in the determination of FDI. Post-1990, the Zimbabwean government undertook several changes to the legislation governing access to land and land resources. From the international investors' point of view, these legislative changes posed a threat to the institution of private property. In contrast, during an earlier period (between 1980 and 1990), the government adopted a market based land reform programme. This entailed the government purchasing land for purposes of resettlement from white commercial farmers and transnational companies (TNCs) at market prices and on a willing-buyer, willing-seller basis.

The market-based land reform was entrenched for the first ten years of independence in accordance with the provisions of the Lancaster House Constitution adopted at independence in 1980. The lapsing of the ten-year constitutional protection of private property in 1990 enabled the government to abandon the market-based system for a government-led compulsory land acquisition programme. The first phase of reforms (1990 - late 1990s) saw the government enacting laws that removed the willing-buyer, willing-seller basis for compulsory acquisition. However, compensation was still guaranteed for all land acquired by the government.

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<sup>22</sup> See for example Kravis and Lipsey (1982), Schneider and Frey (1985), Singh and Jun (1995), Asiedu (2002, 2005).

In the late 1990s, the government embarked on the second phase of reforms which was more radical. To set up the legal framework for the second phase, the government undertook several legislative reforms which removed compensation for the acquired land. The new property laws allowed the government to easily expropriate privately owned land for redistribution purposes without compensating the private owners. More recently, the government also approved legislative reforms allowing the nationalisation of foreign firms in all sectors of the economy.<sup>23</sup> While the Zimbabwean government argues that the changes are aimed at correcting the historically skewed access to productive resources inherited from the colonial regime, it is plausible that the resulting high expropriation risk among other factors negatively impacted FDI inflows which fell from a record high level of US\$ 444 million in 1998 to an annual average of less than US\$ 100 million in the subsequent years.<sup>24</sup>

The objective of the chapter is to undertake an empirical investigation of the impact of property rights on FDI in Zimbabwe for the period 1964 to 2005. An empirical investigation of this nature faces the problem of how to measure the status of property rights. Although there are several property rights indices such as those produced by the Fraser Institute and the Heritage Foundation, their time coverage is too short for any meaningful use in country-specific time-series studies. To overcome this constraint, we make use of a newly constructed *de jure* property rights index presented in chapter two. The index tracks the changes in legislation governing property rights and its' time coverage is sufficient for use in this study.

The rest of the chapter is organised as follows. Section 3.2 provides a background to foreign capital in Zimbabwe. This is followed by a review of both the theoretical and empirical literature in section 3.3. Section 3.4 provides a description of the data and econometric

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<sup>23</sup> In May 2008, the government passed the Economic Empowerment Act facilitating nationalisation of foreign owned firms for redistribution purposes.

<sup>24</sup> See for example arguments in Richardson (2006).

methodology used in the study. Section 3.5 presents the estimation results and analysis from which conclusions and policy recommendations are drawn in section 3.6.

## **3.2 A Brief Overview of Foreign capital in Zimbabwe**

### ***3.2.1 Historical Background of Foreign Capital in Zimbabwe***

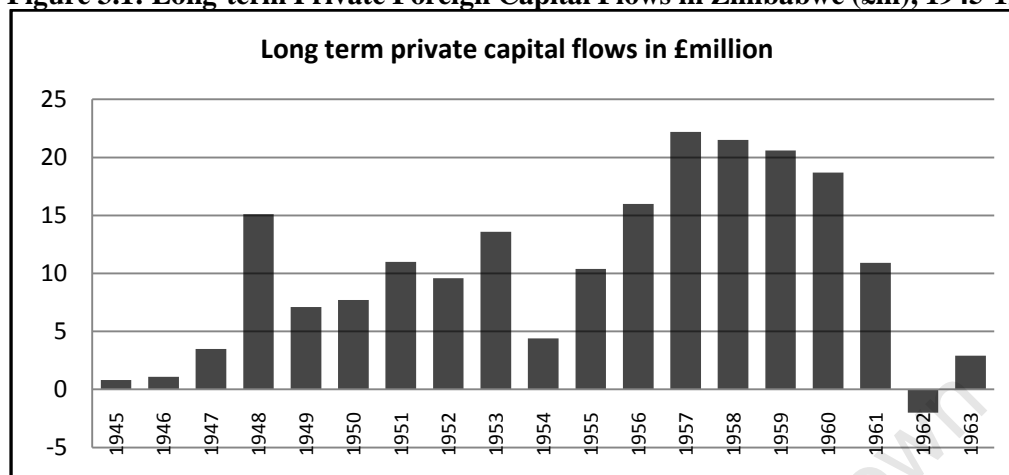
The involvement of foreign capital in Zimbabwe dates back as far as the 1890s. The first type of foreign capital to enter the country was the investment by Cecil Rhodes' British-South African Company (the BSCo) in anticipation of large reserves of gold, matching those of the well-endowed South Africa. However, the early recognition of an overestimation of such gold deposits led the BSCo to transfer political power to about 35 000 local white settlers in 1923.

Figure 3.1 shows the estimates of long-term private capital inflows in Zimbabwe for the period 1945 to 1963. It is evident that in the post World War II period up to 1963, the country experienced a boom in foreign capital inflows. Stoneman (1976) argued that the FDI boom in Zimbabwe between 1953 and 1963 can be attributed the formation of the Central African Federation consisting of Malawi, Zambia and Zimbabwe. The Federation gained Zimbabwe protected markets and cheap labour from the other two members of the Federation. This, in turn attracted multinational companies (MNCs) into Zimbabwe. However as the Federation's future became uncertain in the early 1960s, foreign capital inflows began to fall. The Federation eventually dismantled in 1963 causing uncertainty about the future of MNCs.

In the period from 1964 to the time of independence in 1980, Zimbabwe was highly isolated from the rest of the world due to international sanctions, except for its links with South Africa. Although the role of domestic capital relative to foreign capital was increased and strengthened during the isolation period, external capital continued to flow into the economy.

According to Stoneman (1976), there were substantial inflows of new equity capital mainly from South African companies into the Zimbabwean mining sector.<sup>25</sup>

**Figure 3.1: Long-term Private Foreign Capital Flows in Zimbabwe (£m), 1945-1963**



Source: Stoneman (1976: 33, Table 4).

### **3.2.2 FDI in the Post-Independence Era**

At the time of independence in 1980, the new Zimbabwean government adopted a highly controlled and inward-looking economy. Foreign capital constituted about 70% of the total capital stock and FDI dominated foreign capital inflows (Clarke, 1980). In the first ten years of independence, the new government continued with highly interventionist economic policies inherited from the colonial regime. The business environment was highly regulated through a system of price controls, labour market restrictions and investment control procedures.

Approvals of foreign investors' proposals involved an excessively long process. Foreign firms were required to get permission from the Foreign Investment Centre for the development of any new enterprises in Zimbabwe. Ownership restrictions in some sectors required at least 30% local participation in an enterprise. Policies on repatriation of profits also remained restrictive. Because of the policy environment, which was unfavourable to foreign investors, FDI inflows were very low during the first decade of independence. This occurred despite secure property rights prevailing in Zimbabwe at that time. Table 3.1 shows that in the first

<sup>25</sup> In 1968, 37 new mining companies entered Rhodesia (Stoneman, 1976).

ten years of independence, on average, the country experienced net FDI outflows. As the government came to grips with persistently low levels of fixed capital formation in the late 1980s, the attitude and policies towards foreign investors began to change.

**Table 3.1 Zimbabwe's Foreign Direct Investment Inflows Indicators**

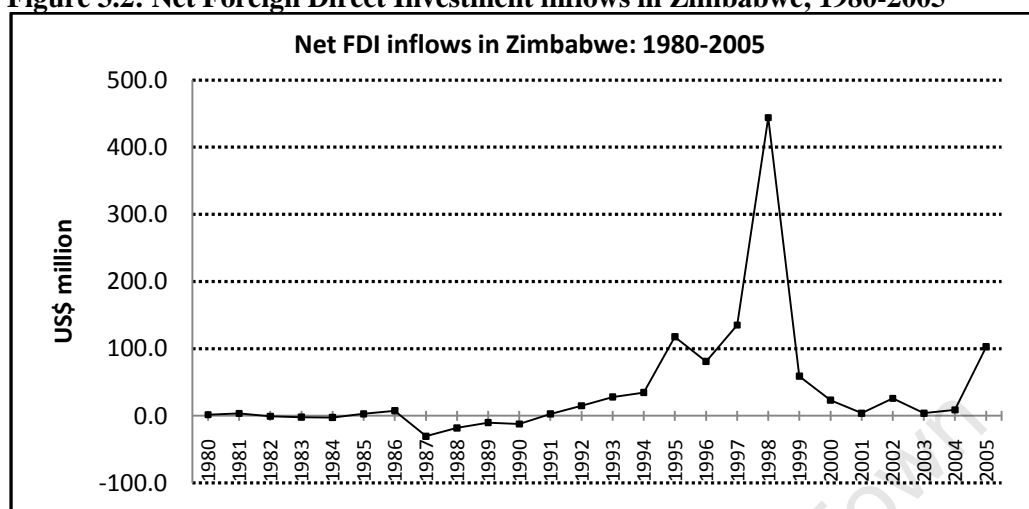
Year	Net Total Foreign Direct Investment Inflows		
	Net total inflows in US\$	% of Gross Fixed Capital formation	% of GDP
1970-1979	18.47	3.35	0.59
1980-1989	-4.88	-0.40	-0.06
1990	-12.22	-0.76	-0.14
1991	2.79	0.16	0.03
1992	19.00	1.26	0.18
1993	38.00	2.45	0.58
1994	41.00	2.78	0.60
1995	117.70	6.73	1.66
1996	80.90	5.24	0.95
1997	135.10	8.88	1.60
1998	444.30	35.55	7.32
1999	59.00	7.46	0.99
2000	23.20	2.66	0.31
2001	3.80	0.31	0.08
2002	25.90	1.16	0.08
2003	30.00	2.94	0.38
2004	60.00	7.44	1.28
2005	102.80	9.80	3.06

Source: UNCTAD FDI Database.

In 1989, a new investment code was adopted. The result was to increase the proportion of after-tax profits that MNCs could repatriate from 50% to 100%. In 1990, the government adopted the IMF-funded Economic Structural Adjustment Programme (ESAP) designed whose thrust was to eliminate economic policies of controls and restrictions. Promotion of FDI was one of the key areas and policy was designed to achieve increased inflows of FDI. In 1992, as part of the structural reform, the Zimbabwe Investment Center (ZIC) was established as a one stop shop for investment approvals. Tariff and tax exemptions were also offered to encourage foreign capital investments, transfer of technology, the utilisation of local raw materials, the development of rural areas and the use of labour-intensive production techniques. Foreign firms geared towards exporting also benefited from the export processing zones incentives in the form of tax holidays and customs free trade. The return to a liberal economy and enthusiastic promotion of FDI resulted in the surge of FDI inflows averaging

above US\$50 million per year between 1990 and 1997. In 1998, FDI inflows reached a record high of US\$ 444 million, as shown in figure 3.2.

**Figure 3.2: Net Foreign Direct Investment inflows in Zimbabwe, 1980-2005**



Source: UNCTAD FDI Database.

In 1998, the sharp surge in FDI inflows was partly driven by the privatisation and liberalisation wave in the Zimbabwean economy. This saw substantial flows of foreign capital particularly from South African firms into various sectors of the Zimbabwean economy. Table 3.2 gives the details of some of the major FDI transactions that took place in 1998.

**Table 3.2: Zimbabwe's Major Sources of FDI inflows in 1998**

Target Company	Source Country	Value of transaction US \$ million
Commercial Bank of Zimbabwe	South Africa	16
J.Pelham	South Africa	22
Hunyani Holdings	South Africa	7
Eureka Gold Mine	Australia	24
Indarama Gold Mine	Canada	15
Pickstone-Pearless Gold Mine	Canada	4,25
Standard Chartered Bank Zimbabwe	United Kingdom	10.9

Source: Makola (2003: 8, Table 3).

In the late 1990s, the country began to experience political instability and macroeconomic imbalances. Investor confidence was further rattled in 2000 when compulsory farm acquisitions enabled by an Act of parliament began. The sudden reversal of FDI flows

coupled with falling domestic investment had depressing effects on the gross fixed formation which fell from a record high of 25% of GDP in 1995 to only 15% of GDP in 2005.<sup>26</sup> The next section presents a review of the theoretical and empirical literature on the impact of institutional factors on FDI.

### **3.3 Literature Review**

#### **3.3.1 Theoretical Literature Overview**

The earliest theories of foreign investment were based on the theory of portfolio investment which assumes that international capital moves across borders in search of high returns (Mcdougall, 1960). In this framework, international capital should flow from developed countries where there are lower returns at the margin, to developing countries where there are significantly higher returns caused by scarcity of capital. These theories were inadequate in explaining the behaviour of capital flows to developing countries which despite their low capital-labour ratios continue to receive the least FDI relative to other parts of the world (Asiedu, 2002).

Economists began to explore alternative theories to explain FDI. The main questions were no longer related to factor movement, rather they were related to why companies wanted to extend their production activities across international borders and why they sought to control foreign production. Hymer (1960) provided the earliest attempt to answer these questions. Hymer's explanations were based on the industrial organisation theory. Firms operating in a foreign country are seen as being at a disadvantage compared to domestic firms. The disadvantage arises because unlike domestic firms, foreign firms are not familiar with local conditions such as legislation, business culture, language, etc. and so on.

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<sup>26</sup> Computations are based on the World Bank Developments Indicators online database.

Foreign firms must therefore have off-setting firm-specific advantages allowing them to compete with domestic firms. The firm-specific advantages include superior technology, scale economies and intangible assets such as managerial skills and brand names. These firm-specific advantages should be transferable across national boundaries at low costs, thereby providing a potential source of economies of scale. Hymer's theory predicted that an MNC arises in order to exploit its firm-specific advantage in a foreign location. Later developments within the industrial organisation approach placed emphasis on the special characteristics that make foreign firms competitive and the nature of market imperfections surrounding FDI.<sup>27</sup>

Although the industrial organisation theories were able to explain why MNCs emerge, there was no explanation of how the MNCs made decisions on where to locate their international operations and in what form. This takes us to yet another important contribution in the development of FDI theory called the internalisation theory which is based on Coase's (1937) transaction costs theorem. Buckley and Casson (1976) gave the first explicit presentation of the internalisation theorem.

The internalisation theory observes that different business activities are linked by flows of intermediate products, including not only ordinary semi-processed materials, but also knowledge in the form of technological know-how and skills embodied in goods and human capital. These links can be based on external market transactions. However, the theory further postulates that external markets are often inefficient, especially with regards to transactions in intermediate products that embody firm-specific intangible assets. This is because the specification and pricing of these products is particularly difficult. Moreover, external markets in knowledge-intensive products are difficult to organise, giving rise to high transaction costs. Buckley and Casson (1976) argued that a firm can overcome market imperfections by creating its own market or internalising hence investing abroad through FDI.

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<sup>27</sup> See for example Kindleberger (1969) and Caves (1971).



Dunning (1980) recognised that although the industrial organisation and the internalisation theories provided useful insights, both theories did not individually offer a comprehensive explanation of FDI. He then proposed an eclectic approach which combined the industrial organisation approach;<sup>28</sup> the transaction costs economics,<sup>29</sup> and the trade and location theory.<sup>30</sup> In Dunning's original eclectic framework, the structure and intensity of MNCs foreign direct investment decisions are influenced by three factors: ownership-specific (O) advantages, internalization (I) advantages and location-specific (L) advantages.

The ownership advantage is the MNCs' possession of firm-specific competitive advantages over domestic firms in serving particular markets. These ownership advantages such as patents, know-how, trademarks, specialised management capabilities, scale advantages, organisational and marketing systems and innovatory capabilities are exclusive only to the firm that owns them and not accessible to any other firm thus providing a potential source of economies of scale.

Location-specific advantages refer to specific locational characteristics of alternative host countries that provide an MNC with the incentive to locate at least some part of their production activities in another country rather than in its home country. The location related FDI determinants include natural resources availability, cultural and political environment, factor prices, transport costs and government policies regarding trade and local content requirements.

Internalisation advantages refer to the benefits that accrue to the MNCs by choosing to enter the foreign market through direct investment rather than relying on international arms-length markets. While the O-advantage depends strictly on the characteristics of the firm and its business, the host country conditions and policies can influence the L and I advantages.

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<sup>28</sup> Hymer (1976) and Caves (1971).

<sup>29</sup> Buckley and Casson (1976).

<sup>30</sup> Vernon (1966).

The theories reviewed thus far are silent on the link between FDI and the institutional environment of the host country. It was only after the early 1990s when there was growing emphasis on the role of institutions in economic growth that FDI theorists began to incorporate the role of institutions in explaining FDI. In particular, recent extensions to the Ownership Location Internalisation (OLI) framework have placed a vital role on institutional factors as determinants of FDI in developing countries.

Gastanaga *et al* (1998) argued that the host country's institutional characteristics, such as the clarity of the country's laws, the extent and honesty of law enforcement, efficiency of the bureaucracy and absence of corruption are important in reducing transaction costs thereby making the host country location desirable.

Li and Resnick (2003) presented another extension to Dunning's OLI framework by incorporating the role of property rights protection and democracy as potential determinants of FDI. They argued that democratic political institutions in the developing host countries have two conflicting effects on FDI. On the one hand, democratic political institutions promote FDI by strengthening property rights protection. The representation of the interests of the common citizens in the legislature prevents the state from predatory rent seeking. Furthermore, the constraints over elected politicians guarantees contract enforcement for business. These effects in turn generate credible property rights protection, which reduce risk for foreign investors and encourage FDI. On the other hand, democratic political institutions result in pluralism, which generates policy outcomes that reduce the MNCs' degree of freedom in the host developing country thereby reducing FDI. Li and Resnick's theory advanced property rights as the most important institutional factor in the determination of FDI. Their views are supported by Olson (1993) and McGuire and Olson (1996).

Dunning (2005) and Dunning and Lundan (2006) also contributed towards fusing the traditional OLI framework with institutional factors. They argued that a country's ability to create a satisfactory legal system, commercial infrastructure and business culture helps in upgrading its competitive advantage to attract FDI.

In addition to the above, other important theoretical contributions linking institutions and FDI are based on the portfolio theoretic approach to capital flows. An important model in this area is by Fedderke (2002). Unlike the original frictionless portfolio theories of foreign investment, Fedderke (2002) showed that international investors take into consideration the effect of expropriation risk when choosing among alternative investment destinations.

### **3.3.1.1 The Fedderke's (2002) Portfolio Theoretic Approach to Capital Flows**

The FDI model is in the spirit of the intertemporally optimizing portfolio theoretic framework. The core drivers of FDI fall into two classes of determinants, namely the rate of return and risk factors. There are positive responses to the rates of return and negative responses to risk. The model employs the standard variational approach and defines the expected return on a portfolio of capital assets faced by an agent which is denoted  $E(R)$ , as:

$$E(R) = D^R - D^C + F^R - F^C \quad (1)$$

$D^R$  and  $F^R$  are defined as the expected return on domestic and foreign capital assets respectively.  $D^C$  and  $F^C$  are defined as the cost of adjustment of domestic and foreign asset holdings respectively. Costs of adjustment arise due to information and transaction costs associated with altering the composition of the capital asset portfolios. Returns to domestic assets are distinguished from returns to foreign assets by having a non-zero probability of "expropriation" denoted by  $0 \leq \pi_D \leq 1$ .

Expropriation may include factors such as nationalisation of assets, periods of domestic instability which might lower the returns to domestic investment, capital controls, and direct

or implicit taxes faced by foreign and domestic investors. The model also assumes that there exists an alternative investment location in which the “expropriation” risk factors are either negligible or at least substantially lower than in the domestic economy.

The model postulates:

$$D^R = [\alpha(K^d) - \beta(K^d)^2](1 - \pi_D) \quad , 0 \leq \pi_D \leq 1, \alpha, \beta > 0 \quad (2)$$

$$F^R = [\gamma(K^f) - \delta(K^f)^2] \quad , \gamma, \delta > 0 \quad (3)$$

$K^d$  and  $K^f$  denote domestic and foreign capital assets holdings respectively. For adjustment costs, the model assumes that the cost of adjustment is increasing in the magnitude of capital.

$$D^C = [a(K^{d'}) + b(K^{d'})^2] \quad , a, b > 0 \quad (4)$$

$$F^C = [c(K^{f'}) + d(K^{f'})^2] \quad , c, d > 0 \quad (5)$$

The variation in the adjustment costs of domestic capital assets is perhaps the prime policy handle available to domestic policy makers, together with the ability to change the expropriation risk. All of  $a$ , and  $\pi_D$  might be affected by policy intervention that raises the friction cost of moving capital assets across international boundaries.

The net present value of the expected return on a portfolio of capital assets over an infinite time horizon is then  $N[K^d, K^f] = \int_0^\infty E(R) e^{-\rho t} dt$  (6)

The Euler equation for the  $K^d$  state variable is:

$$K^{d''}(t) - \rho K^{d'}(t) - \frac{\beta(1-\pi_D)}{b} K^d = \frac{a\rho - \alpha(1-\pi_D)}{2b} \quad (7)$$

With the following solution

$$K^{d*}(t) = (K_0^d - \overline{K^d})e^{\frac{1}{2}\left(\rho - \left(\rho^2 + \frac{4\beta(1-\pi_D)}{b}\right)^{\frac{1}{2}}\right)t} K_0^d + \frac{(1-\pi_D)\alpha - a\rho}{2\beta(1-\pi_D)} \quad (8)$$

$K_0^d$  is the initial holding of domestic capital assets.

Differentiating equation 8 gives the optimal time path of investment in domestic assets which is:

$$I^{d*}(t) = K^{d*'}(t) = \frac{1}{2}\left(\rho - \left(\rho^2 + \frac{4\beta(1-\pi_D)}{b}\right)^{\frac{1}{2}}\right)(K_0^d - \overline{K^d})e^{\frac{1}{2}\left(\rho - \left(\rho^2 + \frac{4\beta(1-\pi_D)}{b}\right)^{\frac{1}{2}}\right)t} \quad (9)$$

Symmetrically, the solution to the Euler equation for the  $K^f$  state variable is:

$$K^{f*}(t) = (K_0^f - \overline{K^f})e^{\frac{1}{2}\left(\rho - \left(\rho^2 + \frac{4\delta}{d}\right)^{\frac{1}{2}}\right)t} + \frac{\gamma - c\rho}{2\delta} \quad (10)$$

With the optimal time path of investment in foreign assets given by

$$I^{f*}(t) = K^{f*'}(t) = \frac{1}{2}\left(\rho - \left(\rho^2 + \frac{4\delta}{d}\right)^{\frac{1}{2}}\right)(K_0^f - \overline{K^f})e^{\frac{1}{2}\left(\rho - \left(\rho^2 + \frac{4\delta}{d}\right)^{\frac{1}{2}}\right)t} \quad (11)$$

Equations 8, 9, 10 and 11 characterise the intertemporal equilibrium and the optimal time paths to the intertemporal equilibrium for both the foreign and domestic capital assets. An important point to note is that both the optimal paths in asset holdings (as characterized by the investment paths) and the optimal assets holdings (as characterized by the two intertemporal equilibria) are asymmetrical between domestic and foreign assets by virtue of the presence of expropriation risk on domestic asset holdings. The Fedderke (2002) model has the advantage of being able to handle both the steady state and the dynamics of adjustment towards the

steady state. For the purposes of this study, our concern is with the mix of foreign and domestic assets in the portfolio of agents in the intertemporal equilibrium.

### Mix of Assets in the Intertemporal Equilibrium

The mix of the foreign to domestic assets in the portfolio of agents in the intertemporal equilibrium can be readily identified from the ratio of the two particular integrals in the solutions to the two Euler equations.  $\varpi_K$  is defined as the ratio of the stock of foreign to domestic capital holdings after agents have adjusted to optimal capital holdings:

$$\varpi_K \equiv \frac{\overline{K^f}}{\overline{K^d}} = \frac{\beta(\gamma - c\rho)(1 - \pi_D)}{\delta[(1 - \pi_D)\alpha - a\rho]} \quad (12)$$

According to equation 12, the portfolio mix is a function of marginal rate of return, marginal costs of adjustment and expropriation risk factors. Given the marginal rate of return on domestic and foreign asset holdings of  $\frac{\partial D^R}{\partial K^d} = [\alpha - 2\beta K^d](1 - \pi_D)$  and  $\frac{\partial F^R}{\partial K^f} = [\gamma - 2\delta K^f]$ , an increase in the returns on domestic capital assets at the margins follows from  $d\alpha > 0$  and  $d\beta, d\pi_D < 0$ . Such changes have the plausible consequence of increasing domestic capital asset holdings relative to foreign capital asset holdings, given  $\frac{\partial \varpi_K}{\partial \alpha} < 0$ ,  $\frac{\partial \varpi_K}{\partial \beta} > 0$  and  $\frac{\partial \varpi_K}{\partial \pi_D} > 0$ .

To the extent that our interest lies on the impact of the host country (domestic) property rights on FDI, our focus must be on the condition  $\frac{\partial \varpi_K}{\partial \pi_D} > 0$ . The condition has important implications for the FDI- institutions link question. It shows that rising expropriation risk in the host country, which is synonymous to weak property rights, will in equilibrium reduce the host country's assets in the international investors' portfolio. This is because expropriation negatively affects the marginal returns to investment, thereby reducing the competitiveness of a country in attracting FDI.

The above discussion provides the general theoretical principles underlying the determination of FDI. It is predicted that the host country's institutional environment is an important determinant of FDI. Institutional arrangements that are hostile to investors will negatively affect a country's competitiveness as an investment destination thereby impeding FDI. We now move on to review the empirical literature in the next sub-section.

### **3.2.2 Empirical Literature Review**

The empirical literature on the determinants of FDI is vast, varying in terms of the explanatory variables and the econometric methodologies used. In this section we start by reviewing studies concerned with impact of institutional variables on FDI and then we consider studies on the macroeconomic determinants of FDI.

#### **3.2.2.1 Institutional Determinants of FDI**

While theory predicts that investor friendly institutions enhance a country's ability to attract FDI, empirical work is inconclusive. This is attributed to the differences in the institutional indicators used, among other things. Several studies investigated the impact of property rights on FDI using different measures of property rights. While some studies showed that secure property rights strongly affect the levels of FDI positively, other studies found an insignificant effect.

Gastanaga *et al* (1998) conducted an investigation of the impact of a number of institutional variables on FDI. The study used a panel of 22 less developed countries over the period 1970 to 1975. The BERI nationalisation risk index was used to proxy for property rights. The index is rated on a 0 to 4 scale with higher scores representing minimum expropriation risk. They found a positive and significant relationship between the FDI-GDP ratio and the BERI nationalisation risk index demonstrating that low levels of nationalisation risk promote FDI inflows. Besides property rights, Gastanaga *et al.* (1998) also controlled for three other

measures of institutional quality, namely contract enforcement, bureaucratic delays and absence of corruption. Contract enforcement and bureaucratic delays were measured by the BERI indices which are also rated on 0 to 4 scales, with higher scores indicating higher levels of institutional efficiency. The index of absence of corruption is taken from Mauro (1995) and ranges from 0 (most corruption) to 10 (least corruption). The study found positive and significant relationships between these three institutional indicators and the FDI-GDP ratio implying that a more secure and investor friendly institutional environment increases FDI inflows.

Stein and Daude (2001) used the ICRG index of expropriation of private property to proxy for property rights. The index is rated on a 0 to 10 scale, with lower ratings given to countries where expropriation of private investment is a likely event. They obtained a positive and significant relationship between FDI inflows and the index. Again, their results suggest that more secure property rights increase FDI inflows. The study also controlled for the risk of repudiation of contracts by government using the La Porta *et al.* (1998) indicators and found that the risk of repudiation of private contracts by the government discourages FDI inflows significantly.

The Li and Resnick (2003) study on the effect of political democracy on FDI yielded important results for the FDI-property rights link question. The study used Ordinary Least Squares (OLS) with Panel Correlated Standard Errors (PCSE) for a sample of 53 developing countries from 1982 to 1995 to investigate Li and Resnick's (2003) theoretical hypothesis that democratic political institutions affect FDI inflows to developing countries via two competing causal links. Using the Knack and Keefer (1995b) property rights index constructed from the ICRG dataset, they found that increases in democracy yield improved property rights which in turn encourage FDI inflows to developing countries. Besides this positive indirect link, democracy is found to have a negative direct effect on FDI inflows.



Another study linking FDI and property rights is by Fedderke and Romm (2004). The study undertook an investigation of the determinants of FDI inflows in South Africa over the period 1956-to 2003. They controlled for property rights and political instability using South Africa's time series institutional indices constructed in Fedderke *et al* (2001). Using the Johansen Vector Error Correction Modelling (VECM) technique, they found that stronger property rights significantly affect real stocks of FDI positively. Increasing political instability is, however, found to have a negative and significant effect on FDI stocks.

More recently, Benassy-Quere *et al* (2007) argued that most empirical studies linking FDI and institutions do not account for the problem of endogeneity. Endogeneity arises when the existence or absence of FDI puts pressure on governments to improve institutions causing a reverse causality. They estimated a gravity equation for bilateral FDI stocks which takes into account the role of institutions in the host country as well as the source country. The problem of endogeneity was tackled by the use of a three-stage procedure for instrumentation and orthogonalisation. Using the Fraser Institute property rights index, estimations were done for a panel of 41 transition countries for the period 1985 to 2000 as well as a cross-section of the same countries for the year 2000. Their findings showed that property rights protection is only significant and positive in the panel estimations but not significant in the cross-sectional estimations.

Another set of studies makes use of composite indices that aggregate over a number of individual institutional indices capturing different institutional variables. Wheeler and Mody (1992) found that a composite index comprising the extent of bureaucratic red tape, political instability, corruption and the quality of the legal system in the host countries does not affect the location of U.S. foreign affiliates. However, the question of whether any of the individual components of the index have a significant effect on FDI is not answered.

Globerman and Shapiro (2002) aggregated Kaufman *et al*'s (1999) six indicators capturing rule of law, political instability and violence, regulatory burden, government effectiveness corruption, voice and accountability into a single governance index. Using a panel of 144 countries over the period 1995 to 1997, they found a significantly positive impact of institutional quality on FDI inflows. Their result holds both for the full sample of countries and for the sub-sample of developing and transition economies.

Harms and Ursprung (2002) analysed the impact of two composite institutional variables on FDI inflows per capita for a sample of 62 developing and transition economies. The first composite index, which they called political risk, was computed from three ICRR indices of expropriation, repudiation and exchange control. The second composite index was an aggregation of the other three ICRG indices of corruption, bureaucratic quality, and law and order. Both indicators were found to be insignificant determinants of FDI inflows.

Daude and Stein (2007) used the average of Kaufmann *et al*'s (1999) indicators of voice and accountability, political instability and lack of violence to proxy for political stability and freedom. They grouped the indicators of rule of law, control of corruption, government effectiveness, and regulatory quality into a single composite index called government efficiency. The groupings were done in order to avoid the problem of multicollinearity that arises when all indicators are included in a single regression individually. Their results showed that while improvement in government efficiency increases FDI stocks, political stability and freedom had no significant effect on FDI. The major weakness of using composite indicators is that the results only help to establish the effect of a cluster of institutions on FDI. It is not possible to assess the role of individual institutional variables included in the composite index.

With the exception of the Fedderke and Romm (2006) study on South Africa, all of the above studies use either cross country or panel data in their empirical work. The major reason for the

limited country-specific empirical evidence on impact of institutional factors on FDI is that existing institutional indicators are only available for short time periods and therefore not useful in country-specific studies.

### **3.2.2.2 Non- Institutional Determinants of FDI**

The literature on FDI has proposed various macroeconomic determinants of FDI. The relationship between such variables and FDI depends on whether the FDI is horizontal or vertical. Horizontal FDI occurs when MNCs have headquarters at home and production plants at home and abroad that produce the same good. The major motive for horizontal FDI is to expand the MNCs markets. Vertical FDI, on the other hand, occurs when MNCs fragment different stages of production by having headquarters at home and production plants in different foreign countries that produce different intermediate or final goods. Vertical FDI is driven by the MNCs' search for efficiency in production, particularly lower input costs.

The market size of the host country, usually measured by real GDP, is considered an important determinant of horizontal FDI and is usually consistently statistically significant in empirical work.<sup>31</sup> The theoretical linkage emanates from the fact that a larger market allows firms to benefit from economies of scale that arise from low distribution costs and bulk-buying of inputs, among other things.

Openness of the domestic economy is also seen as an important determinant of FDI. Openness is influenced by direct FDI restrictions as well as trade barriers. FDI restrictions clearly raise barriers to FDI and are likely to influence the choice that MNCs make with regards to investment location. Two views of the motives for FDI give contradictory predictions regarding the effects of trade liberalization on FDI. The view of FDI and trade being

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<sup>31</sup> See Globerman and Shapiro (1999) and Sethi *et al* (2003) for evidence on Canada and 17 West European countries and 11 Asian countries that receive investments from U.S MNCs; Morisset (2000) for evidence on African countries and Asiedu (2005) for evidence 22 African countries.

substitutes sees tariff-jumping as the motive for FDI, and hence trade liberalisation should negatively affect FDI. In a liberalised trade environment, exporting goods from the home country is relatively more attractive than FDI as a way to serve the regional market. The alternative view sees FDI and trade as complements. This applies, in particular, to vertical FDI where a liberal trade environment is a prerequisite for international division of labour at the firm level.<sup>32</sup>

The link between the capital intensity of the host country's industries and FDI has also generated interest in recent studies. Most transition and developing economies are presumed to have a comparative advantage in the production of goods that are relatively labour-intensive. If FDI is motivated by MNCs' search for lower labour costs, then FDI will flow into industries that have relatively low capital-labour ratios. In such a scenario, capital intensity will be negatively related to FDI inflows. This normally holds for vertical FDI searching for low labour costs. By contrast, when FDI flows into capital-intensive sectors, we are bound to observe a positive link between capital intensity and FDI. This is usually the case with horizontal FDI. The implication then is that the link between FDI and the host country's capital intensity is ambiguous depending on whether vertical or horizontal FDI dominates FDI inflows.<sup>33</sup>

Several studies consider the quality of human capital in the host country. The absence of educated and healthy workers can pose a significant deterrent to MNCs entry. This is especially the case with efficiency-seeking FDI where access to a highly skilled workforce is essential. Some studies have shown that a more highly educated and skilled workforce is essential to FDI.<sup>34</sup> While the quality of human capital is an important determinant of FDI, the

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<sup>32</sup> See the discussion in Nicoletti et al (2003). See also Globerman and Shapiro (1999), and Blomstrom and Kokko (1997).

<sup>33</sup> See for example Fedderke and Romm (2004) for evidence in South Africa.

<sup>34</sup> See for example Mody and Srinivasan (1998), Globerman and Shapiro (2002) and Asiedu (2005).

general labour market conditions will determine the MNCs' ability to tap into the labour resources of the host countries. It is argued that labour market conditions that impose extra costs on investors tend to curb FDI inflows. For example, strict employment protection legislation and high labour tax wedges impact negatively on FDI returns thereby discouraging FDI inflows. In addition, strict employment protection legislation makes it more difficult for MNCs to respond to supply and demand shocks, thus increasing the variability of FDI returns and the risk that investors face in the host country.<sup>35</sup>

Other common explanatory variables of FDI are the host country's corporate tax rates and the availability of infrastructure. With regards to the corporate tax rates, results have not been consistent.<sup>36</sup> The availability and quality of infrastructure (transportation, communications and energy supply) affects FDI positively because good infrastructure lowers transaction and production costs and increase the attractive of a country as an investment destination.<sup>37</sup>

The choice of our empirical model draws upon the literature review which made it clear that the host country's institutional environment and property rights in particular are likely to determine the host country's ability to attract FDI. The choice of other control variables is also guided by both past theoretical and empirical work. The specification of our empirical model is as follows:

$$LFDI = f \left( \begin{matrix} LPROPERTY & LRGDP & OPEN & LRATIO & LEDEBT & LEDUC \\ + & + & \pm & \pm & - & + \end{matrix} \right) \quad (13)$$

LFDI is the log of real FDI stocks, LPROPERTY is the log of the property rights index in Zimbabwe, LRGDP is log of the real GDP, OPEN is a trade openness index, LRATIO is log

<sup>35</sup> See for example Sethi et al (2003) and Nicoletti et al (2003).

<sup>36</sup> While Gastanaga *et al*(1998), and Wei (2000) show that taxes and tariffs have a negative and significant effect on FDI, Wheeler and Moody (1992) find an insignificant relationship.

<sup>37</sup> See Wheeler and Moody (1992) , Loree and Guisinger (1995) and Globerman and Shapiro (2002).

of the capital labour ratio, LEDEBT is log of the external debt to GDP ratio and LEDUC is the log of the Barro and Lee (1993) educational attainment index.

There are two major reasons for choosing FDI stocks rather than FDI inflows as the dependant variable. First, stocks are much less volatile than flows which are sometimes dependent on one or two large takeovers, especially in relatively small countries. Secondly, the long-term contribution of FDI to domestic investment (and therefore policy stance towards FDI) may be better reflected in accumulated FDI stock data (Read, 2007).

The signs below the variables in equation 13 give our *a priori* expectations. Secure property rights should have a positive effect on FDI. This is in line with the NIE theoretical argument that strong institutions are key to reducing uncertainty and transaction costs that arise in economic exchange. This in turn would enhance the host country's ability to attract FDI. The market size of the host country is expected to have a positive effect on FDI. This would be in support of the market-size hypothesis that larger markets are a source of economies of scale which enhances returns to investment leading to more FDI. The effect of trade openness could either be positive or negative depending on whether horizontal or vertical FDI dominates as explained in the above section. The link between the host country's industries' capital intensity and FDI is also ambiguous. It can either be positive or negative depending on the whether labour-intensive (vertical) FDI or capital-intensive (horizontal) FDI dominates.

The ratio of external debt to GDP is expected to carry a negative coefficient because when the government's external debt burden increases, the likelihood of a balance of payments crisis also increases. This may attract the imposition of restrictions on profit and dividend remittances by the host country's government in order to curb outflows of foreign capital. MNCs facing the risk of being unable to remit profits to their mother companies will be

discouraged. Lastly, human capital is expected to have a positive effect of FDI by providing the skills required by MNCs.

### **3.4 Econometric Methodology and Data Issues**

#### **3.4.1 *Econometric Estimation Methodology***

The study employs two econometric procedures. Firstly, in order to explore the directions of associations between the variables included in the model, we make use of the F-test statistic proposed by Pesaran, Shin and Smith (PSS henceforth) (1996, 2001). Secondly, we then employ the Johansen Vector Error Correction Modelling (VECM) technique to estimate the structural model for linkages between the FDI stock and its institutional and macroeconomic determinants. The following is an outline of the two econometric procedures.

##### **3.4.1.1 Pesaran Shin Smith F-Test**

In estimating the empirical model in equation 13, issues of endogeneity arise. We cannot rule out a priori that institutions (property rights in this case) are endogenous to FDI. Daude and Stein (2007) noted that endogeneity arises because once investors are located in a country they might become a constituency that demands better institutions. This creates feedback effects from FDI to institutions. If estimation proceeds in the presence of endogeneity, the resulting parameter estimates will be biased.

It is therefore necessary to determine the directions of association between the variables in our model. We employ the PSS-F test to establish the directions of associations. The following is an overview of the PSS F- test.

We consider the following error correction model:

$$\Delta Z_t = a_0 + a_1 t + \Pi Z_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \Delta Z_{t-i} + \varepsilon_t, t = 1, 2 \dots \quad (14)$$

The  $Z$  -matrix is partitioned as  $Z_t = (y_t, x_t')'$  . Partitioning the error term conformably with  $Z_t = (y_t, x_t')'$  as  $\varepsilon_t = (\varepsilon_{yt}, \varepsilon_{xt}')'$  and its variance matrix as:

$$\Omega = \begin{pmatrix} \omega_{yy} & \omega_{yx} \\ \omega_{xy} & \Omega_{yx} \end{pmatrix} \quad (15)$$

The long-run multiplier matrix  $\Pi$  is partitioned conformably with  $Z_t = (y_t, x_t')'$  as:

$$\begin{pmatrix} \pi_{yy} & \pi_{yx} \\ \pi_{xy} & \Pi_{xx} \end{pmatrix} \quad (16)$$

Then, under the assumption  $\pi_{xy} = 0$ , it follows that:

$$\Delta x_t = a_{x0} + a_{x1}t + \Pi_{xx}x_{t-1} + \sum_{i=1}^{p-1} \Gamma_{xi}\Delta Z_{t-i} + \varepsilon_{xt}, \quad t = 1, 2, \dots, n \quad \text{and} \quad (17)$$

$$\Delta y_t = c_0 + c_1t + \pi_{yy}y_{t-1} + \pi_{yx.x}x_{t-1} + \sum_{i=1}^{p-1} \psi'_i \Delta Z_{t-i} + \omega' \Delta x_t + u_t \quad (18)$$

The specifications of  $c_0$  and  $c_1$ , are defined in equation 2.3 of Pesaran, Shin and Smith (2001),  $\omega$  in equation 2.4 and  $\psi$  in equation 2.5 of the same reference.

It has been shown in equations 17 and 18 that when  $\pi_{xy} = 0$ , then  $\{x_t\}_{t=1}^{\infty}$  long-run forces  $\{y_t\}_{t=1}^{\infty}$ . This implies that there is no feedback from the level of  $y_t$  to  $x_t$  in the long run. However, the possibility that  $\{y_t\}_{t=1}^{\infty}$  Granger causes  $\{x_t\}_{t=1}^{\infty}$  in the short run remains. Provided that  $\Pi_{xx}$  has a rank  $r$ ,  $0 \leq r \leq k$ , then weak exogeneity for  $\{x_t\}_{t=1}^{\infty}$  follows provided either

- 1)  $\pi_{xy} = 0$  and  $\Pi_{xx} = 0$ , for  $\pi_{yy}$  and  $\pi_{yx.x} = \pi_{yx}$  or
- 2) Where  $\Pi_{xx} \neq 0$ , as  $\pi_{yy}$  and  $\pi_{yx.x} = \pi_{yx} - \omega' \Pi_{xx}$  are variation-free from the parameters in equation 18,  $\{x_t\}_{t=1}^{\infty}$  remains weakly exogenous.

The PSS F-test is based on the joint null hypothesis that  $\pi_{yy} = 0$  and  $\pi_{yx.x} = 0$ , under the sequential treatment of all variables in the specification as the outcome variable. Acceptance



of the joint null hypothesis, thus establishes the absence of a level relationship hence weak exogeneity for the y-variable specified under the test.

To operationalise the PSS F- test, we consider the Conditional Autoregressive Distributed Lag (ARDL)-error correction model of our empirical model given by:

$$\begin{aligned} \Delta LFDI = & \varphi_0 + \varphi_1 t + \sum_{i=1}^2 \beta_i \Delta LGDP_{t-i} + \sum_{i=1}^2 \delta_i \Delta LRATIO_{t-i} + \sum_{i=1}^2 \mu_i \Delta LEDEBT_{t-i} + \sum_{i=1}^2 \theta_i \Delta LEDUC_{t-i} + \\ & \sum_{i=1}^2 \alpha_i \Delta OPEN_{t-i} + \sum_{i=1}^2 \lambda_i \Delta LPROPERT_{t-i} + \varphi_3 LFDI_{t-1} + \varphi_4 LGDP_{t-1} + \varphi_5 LRATIO_{t-1} + \\ & \varphi_6 LDEBT_{t-1} + \varphi_7 LEDUC_{t-1} + \varphi_8 OPEN_{t-1} + \varphi_9 LPROPERT_{t-1} + v_t \end{aligned} \quad (19)$$

The order of augmentation which is equal to 2 is determined by the need to render the error term free of systematic variation, in order to extract the long run relationship. The null of no long-run relationship ( $H_0: \varphi_3 = \varphi_4 = \varphi_5 = \varphi_6 = \varphi_7 = \varphi_8 = \varphi_9 = 0$ ) is tested against the alternative by means of an F-test. This test statistic has a non-standard distribution irrespective of whether the variables are I(0) or I(1). Pesaran and Pesaran (1997) provide two asymptotic critical values. The upper bound denoted  $F_u$  assumes that all variables are I(1) and the lower bound denoted  $F_L$  assumes that all variables are I(0).

Where the estimated  $\hat{F} > F_u$ , we reject the null hypothesis and conclude that a long run relationship is present between the dependant variable and all the other variables in the model.

If  $\hat{F} < F_L$  then the null of no long run relationship cannot be rejected.

When  $F_L < \hat{F} < F_u$ , result of the inference is inconclusive. The PSS F-test does not require the pretesting of the variables in the model for unit roots, an advantage it enjoys over the Johansen VECM approach.

### 3.4.1.2 The Johansen VECM Technique

We employ the standard Johansen technique<sup>38</sup> for multivariate cointegration to estimate the long term determinants of FDI. In its general form, an unrestricted VAR is specified as follows:

$$z_t = A_1 z_{t-1} + \dots + A_m z_{t-m} + \mu + \delta_t \quad (20)$$

$z_t$  is a  $n \times 1$  matrix of endogenous variables,  $m$  is the lag length,  $\mu$  is matrix of deterministic terms and  $\delta$  a Gaussian error term. Reparametrisation provides the VECM specification:

$$\Delta z_t = \sum_{i=1}^{k-1} \Gamma_i \Delta z_{t-i} + \Pi z_{t-k+1} + \mu + \delta_t \quad (21)$$

The existence of  $r$  cointegrating relationships amounts to the hypothesis that:

$$H_1(r): \Pi = \alpha\beta' \quad (22)$$

Where  $\Pi$  is  $p \times p$ ,  $\alpha$  is a  $p \times r$  matrix of the speed of adjustment to equilibrium and  $\beta$  is also  $p \times r$  matrix of long run coefficients, both of which are assumed to be of full rank. Therefore,  $H_1(r)$  is the hypothesis of reduced rank of  $\Pi$ . When  $r > 1$ , that is, when we have more than one cointegrating relationship, issues of identification arise<sup>39</sup> and should be resolved by means of restrictions on the loading matrix ( $\alpha$ ), the matrix representing short run dynamics ( $\Gamma$ ) and the cointegration space  $\beta$ .<sup>40</sup> In a nutshell, the Johansen VECM technique involves the following steps:

- i. Carrying out unit roots tests on all variables included in the model.
- ii. Choosing the order of the VAR such that the error terms in each equation have no autocorrelation.

<sup>38</sup> Johansen and Juselius (1990, 1991, 1992).

<sup>39</sup> Wickens (1996), Johansen (1990, 1992), Pesaran and Shin (1995a), Pesaran, Shin and Smith (1996).

<sup>40</sup> Greenslade *et al* (1999).

- iii. Determining the number of cointegrating vectors ( $r$ ) using the Johansen cointegration test.
- iv. Placing identification restrictions onto  $\beta$  to interpret the cointegrating relations economically
- v. Testing the over-identification restrictions on  $\beta$ .

### 3.4.1.3 Model Specification

Our concern is with the determination of FDI with particular attention to the role of property rights. While our discussion in both the theoretical and empirical literature reviews suggests the existence of a long run relationship between FDI and its institutional and macroeconomic determinants, we expect strong feedback effects from FDI to output (GDP). The theoretical hypothesis is that FDI possesses some technological spill over effects through the introduction of more advanced technology and management practices. This in turn is expected to enhance productivity and output in the host country (Borensztein *et al*, 1998). Theory therefore supports the existence of two long run relationships in the system, one explaining FDI and the other explaining GDP.

Pesaran and Shin (1995b) have shown that  $r^2$  restrictions are needed for just identification. With a prior of 2 vectors, we need to impose 4 restrictions for just-identification. In each vector, we impose 2 restrictions, one normalisation restriction and one exclusion restriction. There are different approaches used in choosing the restrictions. Following Pesaran and Shin (1995b), we take a theory guided approach which allows us to impose restrictions that are economically meaningful. In addition to the theory, our choice of the restrictions is further aided by the PSS F-tests. Normalisation restrictions are placed only on those variables found to be endogenous by the PSS F-test.

Our *a priori* just-identified model is shown in equation 23. In the first vector, we normalise on LFDI, which is our variable of interest. The exclusion restriction is imposed on trade openness.<sup>41</sup> The second vector normalises on LGDP and imposes an exclusion restriction on LEDEBT. Over-identification of the system is done by further restrictions on the just-identified model. A  $\chi^2$  statistic is then used to test the validity of the over-identifying restrictions.

The estimates of the long run parameters  $\beta_{ij}$  contain no information about the speed of adjustment of the variables to deviations from the equilibrium. Instead, the size and signs of each error correction term (*ECT*),  $\alpha_{ij}$  represents the direction and speed of adjustment of the system to its long run equilibrium after a shock. With the prior of  $r=2$ , our empirical specification is as follows:

$$\Pi Z_{t-k+1} = \begin{bmatrix} \alpha_{11} & \alpha_{12} \\ \alpha_{21} & \alpha_{22} \\ \alpha_{31} & \alpha_{32} \\ \alpha_{41} & \alpha_{42} \\ \alpha_{51} & \alpha_{52} \\ \alpha_{61} & \alpha_{62} \\ \alpha_{71} & \alpha_{72} \end{bmatrix} \begin{bmatrix} 1 & -\beta_{12} & \pm\beta_{13} & \beta_{14} & 0 & -\beta_{16} & -\beta_{17} \\ -\beta_{21} & 1 & -\beta_{23} & 0 & -\beta_{25} & -\beta_{26} & -\beta_{27} \end{bmatrix} \begin{bmatrix} \text{LFDI} \\ \text{LRGDP} \\ \text{LRATIO} \\ \text{LEDEBT} \\ \text{OPEN} \\ \text{LEDUC} \\ \text{LPROPERTZ} \end{bmatrix}_{t-k+1} \quad (23)$$

### 3.4.2. Description of Variables and Data Sources

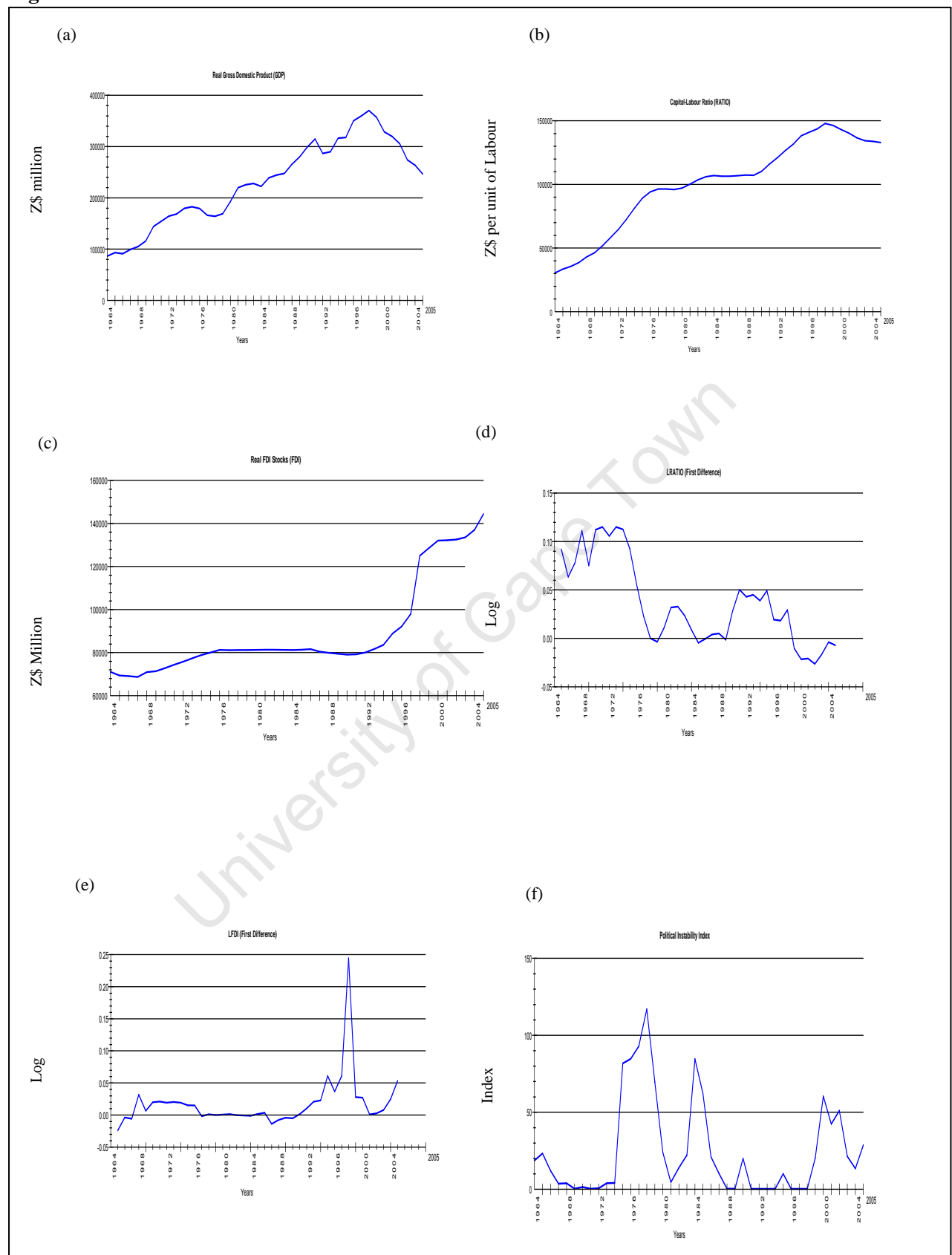
We employ annual time series data for Zimbabwe for the period 1964 to 2005. The following table gives a description of the variables and the data sources. The plots of the variables are presented in figure 3.3.

<sup>41</sup> The choice of this restriction is based on the fact that Zimbabwe's major trading partner is South Africa and the two countries have always enjoyed an open trade regime even when Zimbabwe has been isolated from the rest of the world. In this regard, changes in Zimbabwe's trade policy are not expected to yield a significant impact on FDI. A more relevant measure would be one that captures openness to foreign capital.

**Table 3.3: Variable Description and Data Sources**

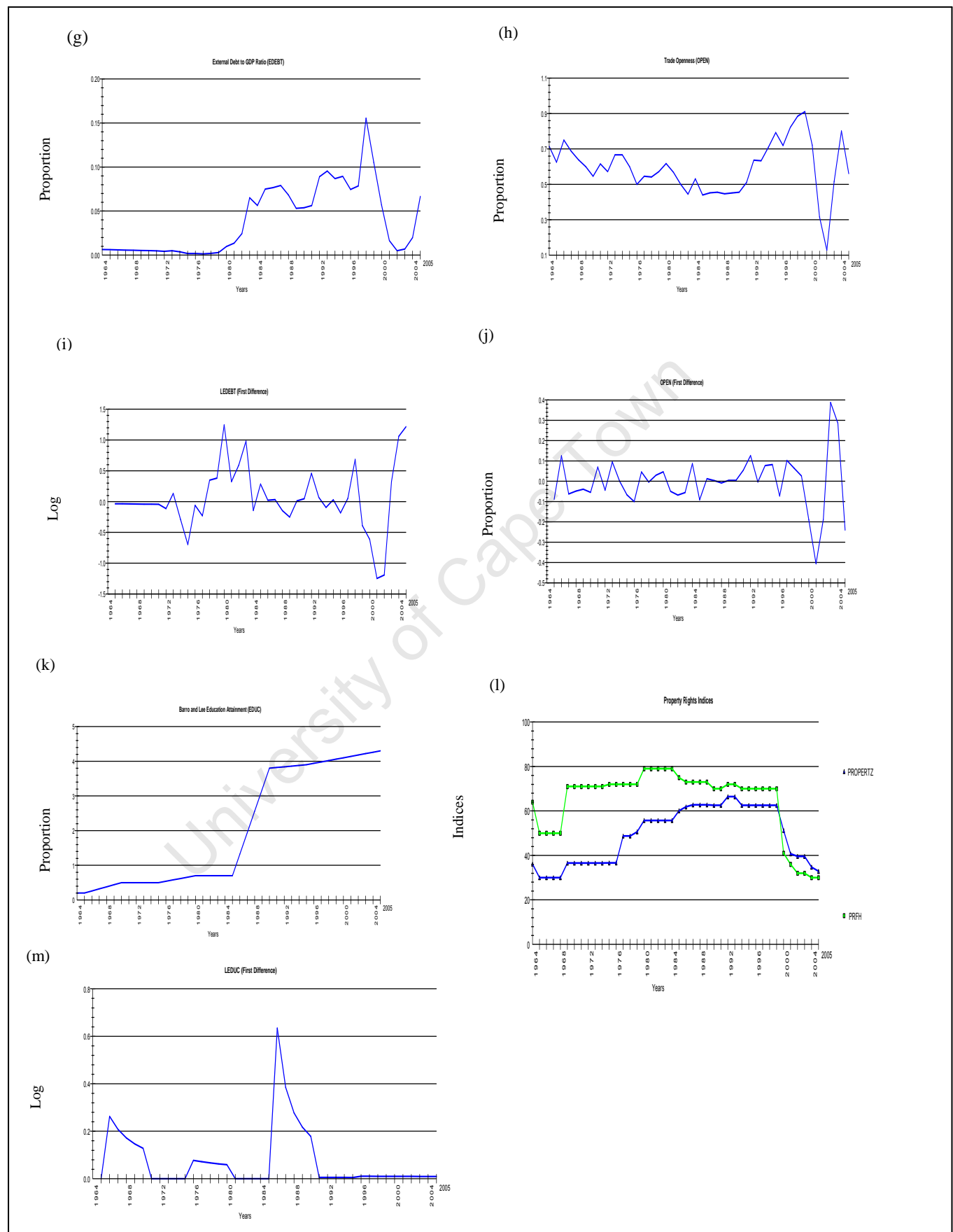
Variable	Description	Source
LFDI	Log of Real FDI Stocks at 2000 prices	See Appendix 1B for details
LRGDP	Log of Real Gross Domestic Product at 2000 prices	World Bank Development Indicators
LRATIO	Log of the Capital-Labor Ratio	See Appendix 2B for details
LEXDEBT	Log of the ratio of external debt to GDP	World Bank Indicators
OPEN	$\frac{\text{Exports+Imports}}{\text{GDP}}$	IMF International Financial Statistics
LEDUC	Log of the Barro and Lee's proportion of the population above 25 years with completed post-secondary education.	The Barro and Lee (1993) Educational Attainment Data Base
LPROPERTZ	Log of the Property Rights Index for Zimbabwe	Constructed in chapter two of the thesis
LINVERSION	Dummy for the socio-political unrests associated with the land inversions between 2000 and 2003.	
70sWAR	Dummy for the war time political instability between 1974 and 1979.	
D98	Dummy for the once-off surge in FDI stocks in 1998.	
DU74	Dummy for the stagnant fixed capital formation between 1974 and 1988.	
DEDUC	Dummy for the structural change in the educational attainment index taking the value of one between 1985 and 1990.	

**Figure 3.3: Time-series Plots of Variables**



Notes: 1) Variable names are in brackets. 2) A Letter L before variable names stands for logarithm.

Figure 3.3 continued: Time-series Plots of Variables



### 3.5. Findings

#### 3.5.1. The Univariate Characteristics of the Data

The VECM technique requires the pretesting of unit roots (stationarity) for all the variables in the model. We made use of the standard Augmented Dickey-Fuller (ADF) to test for unit roots.<sup>42</sup> The top panel of Table 3.4 presents the results of the ADF tests with the trend ( $\tau_\tau$ ) and without the trend ( $\tau_\mu$ ).

**Table 3.4: ADF and Perron Unit Root Tests.**

ADF Unit Root Tests.						
Variable	Levels		First Differences		Second Differences	
	$\tau_\mu$	$\tau_\tau$	$\tau_\mu$	$\tau_\tau$	$\tau_\mu$	$\tau_\tau$
<b>LFDI</b>	1.42	-0.52	-4.44*	-4.68*		
<b>LGDP</b>	-2.26	-0.48	-3.68*	-4.46*		
<b>OPEN</b>	-2.53	-2.49	-7.07*	-6.98*		
<b>LEDEBT</b>	-1.87	-3.05	-3.02*	-4.21*		
<b>LPROPERTZ</b>	-1.54	0.59	-5.19*	-6.22*		
<b>LPRFH</b>	-0.15	-1.02	-4.96*	-5.91*		
<b>LEDUC</b>	-1.65	-2.27	-3.34*	-3.46*		
<b>LRATIO</b>	-3.51	-2.23	-1.32	-2.32	-5.95*	-5.86*
Perron Unit Root Test with Structural breaks						
<b>LRATIO</b>		-2.02		-3.82*		
<b>LFDI</b>		-1.49		-4.12*		
<b>LEDUC</b>		-0.93		-4.89*		

Notes: \* denotes the rejection of the null of non-stationarity at the 5% level of significance.

The ADF tests show that all of the variables except LRATIO are I(1). In the case of the variable LRATIO, the ADF tests fail to reject the null of non-stationarity for the first difference implying that the variable's order of integration would be higher than I(1). This finding is counterintuitive on *a priori* grounds, since it would imply that investment is explosive. It therefore requires very sound evidence before being accepted. An examination of the plot of the first difference of LRATIO in figure 3.3(d) proves instructive. The series seems to have been subjected to a structural break in 1974.

<sup>42</sup> Dickey and Fuller (1979).



This is not surprising given that 1974 marks the beginning of intensified political instability related to the war between the colonial government's army and the indigenous nationalist movements' army. The rise in political instability might have been responsible for a slow down in both private and state capital formation. The surge in political instability in 1974 is shown by the political instability index constructed in chapter 2 and reproduced in figure 3.3(f).

Perron (1989) demonstrated that in the presence of such structural breaks, the standard ADF tests for unit root suffer from low power and tend to over-accept the null of non stationarity. The other variables that seem to have been subjected to substantial structural breaks are FDI in 1997, EDUC in 1985, EXDEBT in 1998 and OPEN in 1999.

However, after examining the first differences of the variables OPEN and EXDEBT shown in figures 3.3(j) and 3.3(i) respectively, it is clear that the variables become stationary after the first difference. We can therefore conclude that even in the presence of the structural breaks the two variables are I(1). The plots of the first differences of the log of FDI, the log of RATIO and the log of EDUC shown in figures 3.3(e), 3.3(d) and 3.3(m) respectively seem to suggest that even after taking the first differences, the series remain non-stationary.

Therefore, to determine the correct level of integration of the variables LRATIO, LFDI and LEDUC, we apply the Perron (1989) unit root tests which accounts for the presence of structural breaks. Perron (1989) suggested three different models to account for structural breaks in unit root tests. The choice of the appropriate model depends on the form of the structural break. The three different models are:

$$\textbf{Model A: } y_t = \mu + \beta t + \theta DU + \delta DTB + \alpha y_{t-1} + \sum_{i=1}^k \gamma_i \Delta y_{t-i} + \varepsilon_t \quad (24)$$

$$\textbf{Model B: } y_t = \mu + \beta t + \theta DU + \lambda DT^* + \alpha y_{t-1} + \sum_{i=1}^k \gamma_i \Delta y_{t-i} + \varepsilon_t \quad (25)$$

$$\textbf{Model C: } y_t = \mu + \beta t + \theta DU + \varphi DT + \delta DTB + \alpha y_{t-1} + \sum_{i=1}^k \gamma_i \Delta y_{t-i} + \varepsilon_t \quad (26)$$

TB is the break date which is determined exogenously. DU is a shift dummy equal to 1 if  $t > TB$  and 0 otherwise. DTB is a step dummy equal to 1 if  $t=TB+1$  and zero otherwise. DT equals  $t-TB$  if  $t > TB$  and zero elsewhere and  $DT^*$  equals  $t-TB$

Model A allows an exogenous change in the intercept of the trend function while B allows for an exogenous change in the slope of the trend function. Model C accounts for both a slope and intercept change. The null hypothesis in the Perron tests is that the data generating process of the series is characterised by a unit root or non-stationarity. The test is implemented by testing for the null of unit root,  $\hat{\alpha} = 1$ , in the above specifications.

We start by applying the Perron test to the levels and then to the first difference of each variable. The Perron t-statistics are presented in the lower panel of table 3.4. The critical values are obtained from Perron (1989). In the case of LRATIO, the break date is set exogenously at  $TB = 1974$ . We apply model C on the levels. The critical value at the 5% significance level at  $\lambda = \frac{TB}{T} = 0.27$  equals -3.87.<sup>43</sup> Since the Perron t-statistic  $> \tau_{critical}$ , we do not reject the null of a unit root and conclude that LRATIO is  $\neq I(0)$ .

The next procedure is to apply the Perron test to the first difference of LRATIO. As shown in figure 3.3(d), the structural break on the first difference takes the form of a mean shift. The appropriate model to apply is therefore model A. The appropriate critical value at the 5% significance level and  $\lambda=0.27$  equals -3.76.<sup>44</sup> Since the Perron t-statistic  $< \tau_{critical}$ , we reject the null of a unit root in  $\Delta LRATIO$  and conclude that LRATIO is an  $I(1)$  subject to the presence of the structural break in 1974.

<sup>43</sup> See Perron (1989: 1377, Table VI.B).

<sup>44</sup> See Perron (1989: 1376, Table IV.B).

For the LFDI variable, the break point is set exogenously at  $TB = 1997$ . We applied model C to both the levels and the first difference. The critical values at the 5% level of significance and  $\lambda=0.80$  equals  $-4.04$ .<sup>45</sup> The test statistics in the lower panel of table 3.4 show that the variable LFDI is an  $I(1)$  subject to the presence of a structural break in 1997.

In the case of the variable LEDUC, the break point is in 1985. Model C is again applied to both the levels and the first difference. The critical value at the 5% level of significance and  $\lambda=0.52$  equal  $-4.24$ .<sup>46</sup> From the t-statistics presented in the lower panel of table 3.4, we again make the conclusion that LEDUC is an  $I(1)$  subject to the presence of a structural break in 1985.

### 3.5.2 PSS F-tests

We used the PSS F-test explained in section 3.41 to infer the directions of association between the variables in our empirical model. The PSS F-statistics and relevant bounds critical values are presented in table 3.5. The tests show that at the 5% level of significance,  $\hat{F}_{LFDI}$ ,  $\hat{F}_{LGDP}$  and  $\hat{F}_{LEDOC}$  are less than  $F_u$ . Therefore, we reject the null hypothesis of the absence of a level relationship when LFDI, LGDP and LEDUC are dependent variables. The results imply that, the variables LFDI, LGDP and LEDUC are endogenous or outcome variables which are being explained in the long-run equations.

Since  $\hat{F}_{LDEBT}$ ,  $\hat{F}_{OPEN}$  and  $\hat{F}_{LPROPERT}$  are less than  $F_L$ , we fail to reject the null hypothesis of the absence of a level relationship when the LDEBT, OPEN and LPROPERT are dependent variables. Therefore, LDEBT, OPEN and LPROPERT, can be treated as long-run forcing variables or weakly exogenous variables. This implies that in the long run, these variables are not explained by the other variables in the model. However, this does not rule out contemporaneous or short-term interactions.

<sup>45</sup> See Perron (1989: 1377, Table VI.B).

<sup>46</sup> See Perron (1989:1377, Table VI.B).

Since the property rights index is weakly exogenous, this rules out feedback affects from other variables in the system to property rights in the long-run. Regarding the variable LRATIO, the results are inconclusive since  $F_L < \hat{F}_{LRATIO} < F_u$ . This implies that we cannot establish whether the variable LRATIO is an outcome or forcing variable.

**Table 3.5: PSS F- Tests**

Dependant Variable	F-statistic	Interpretation
$\hat{F}_{LFDI}$	4.66*	Outcome variable
$\hat{F}_{LGDP}$	4.98*	Outcome variable
$\hat{F}_{LRATIO}$	3.02†	Inconclusive
$\hat{F}_{LDEBT}$	1.50	Forcing variable
$\hat{F}_{LEDUC}$	4.80*	Outcome variable
$\hat{F}_{LOPEN}$	1.80	Forcing variable
$\hat{F}_{LPROPERT}$	1.26	Forcing Variable

Notes: 1) Asymptotic critical value bounds are obtained from Pesaran and Pesaran (1997: 478) case III: Intercept and trend for  $k=7$ . At 5% significance level:  $F_L = 2.272$  and  $F_u = 3.883$ .

2) \* denotes the rejection of the null of no long run relationship at the 5% levels of significance respectively and † denotes inconclusive results.

The PSS F-tests have shown the existence of more than one outcome or endogenous variables in the system. This renders a single-equation approach inappropriate for estimating the parameters of our empirical model. In this case, the Johansen VECM technique is more appropriate. The choice of normalisation restrictions in the VECM will be aided by the results of the PSS F-test. Normalisation restrictions will be placed on those variables identified as endogenous variables by the PSS F-test.

### 3.5.3 Cointegration Analysis

We now turn to the Johansen test for cointegration. Table 3.6 reports the trace and maximal eigenvalue test-statistics for the number of cointegrating vectors under the assumption of

unrestricted intercepts and restricted trends.<sup>47</sup> The VAR of order 2 is chosen on the basis of the Akaike Information Criteria.

While the maximal eigenvalue statistic shows that there are two long run cointegrating vectors, the trace statistic gives three cointegrating vectors at the 5% level of significance. To resolve the conflicting results of the maximal eigenvalue and trace tests, Enders (2004) argued that the results of the maximal eigenvalue tests are often preferred in small samples. Another way of solving the ambiguity of the results from the two tests is to anchor the choice of the number of cointegrating vectors on theory. The theory-guided route is useful because of the low power of the above tests in small samples.

As explained in section 3.4.1, theory supports the existence of two cointegrating relationships one normalised on LFDI and the other on LGDP. Also, according to the PSS F-tests, LFDI and LGDP are outcomes variables which we can normalise for just-identification of the system. Our final choice of the number of cointegrating vectors is based on the Johansen's maximal eigenvalue statistic whose prediction of two cointegrating vectors is supported by theory. In the next sub-section we report the long-run and short-run parameter estimates and their interpretation.

**Table 3.6: Maximal Eigenvalue and Trace Statistics for Cointegration**

<b>Unrestricted intercepts and no trends, Order of the VAR = 2</b>				
Null	Alternative	Max Eigen Value	90% Critical Value	95% Critical Value
r = 0	r = 1	82.553*	46.970	44.010
r ≤ 1	r = 2	41.606*	40.890	37.920
r ≤ 2	r = 3	31.383	34.700	32.120
r ≤ 3	r = 4	14.676	22.160	9.790
Null	Alternative	Trace Value	90% Critical Value	95% Critical Value
r = 0	r = 1	198.8936*	128.7900	123.3300
r ≤ 1	r = 2	116.3406*	97.8300	93.1300
r ≤ 2	r = 3	74.7347*	72.1000	68.1300
r ≤ 3	r = 4	43.3525	49.3600	46.0000

Notes: \* denotes rejection of null at the 5% level of significance.

<sup>47</sup> See for example Mafusire (2004) for the same assumption on the relationship between FDI, trade and GDP in Zimbabwe.

### 3.5.4 Interpretation of the Long-run and Short-run Parameter Estimates

Table 3.7 reports the long-run and short-run parameter estimates. The just-identified model is reported in column A. To impose over-identifying restrictions, we follow the procedure in Pesaran and Pesaran (1997). The procedure involves computation of asymptotic t-statistics by dividing the coefficient estimates by their corresponding asymptotic standard errors. The asymptotic t-statistics are then used to make an inference on the significance of the long-run parameters estimates. Over-identification then proceeds by zero restrictions on the insignificant variables.

The asymptotic t-statistics in the just-identified model in column A show that all variables in the LFDI vector are significant at the 5% and 10% significance levels. In the LGDP vector, all variables except LPROPERT are also significant at the 5% and 10% significance levels. Therefore over-identification proceeds with a zero restriction on  $\beta_{27}$ , the coefficient of LPROPERT in the LGDP vector. From an economic point of view, this restriction implies that LPROPERT does not directly affect the level of LGDP. However, LPROPERT can only affect the level of LGDP indirectly via its effect on LFDI.

Column B reports the over-identified baseline model. The likelihood ratio test for over identification with a  $\chi^2=0.26544$  and a p-value = 0.871 accepts the zero restriction on  $\beta_{27}$ . The two equilibrium relationships in the baseline over-identified model in column B can be represented as follows:

$$\begin{aligned} \text{LFDI} = & 0.01t + 1.01\text{LGDP}_t - 1.68\text{LRATIO}_t - 0.26\text{LEXDEBT}_t + 0.66\text{LEDUC}_t + 1.09\text{LPROPERT}_t \\ & (3.71) \quad (2.08) \quad (2.56) \quad (2.99) \quad (1.92) \quad (2.05) \end{aligned} \quad (27)$$

$$\begin{aligned} \text{LGDP} = & 0.07t + 0.65\text{LFDI}_t + 0.66\text{LRATIO}_t + 0.77\text{LEDUC}_t + 1.42\text{OPEN}_t \\ & (2.61) \quad (3.25) \quad (4.48) \quad (1.88) \quad (2.55) \end{aligned} \quad (28)$$

The error correction terms in column B of table 3.7 represent the short run dynamics for each equilibrium relationship. The error correction term  $ECT1_{t-1}$  for the LFDI vector in equation 27 is -0.02. Equation 28, the LGDP vector has an error correction term  $ECT2_{t-1}$  of -0.09. Although statistically significant, the error correction (adjustment) terms indicate a very slow adjustment to the long-run equilibrium.

We start off by interpreting the coefficients in the LFDI vector in equation 27 which shows the determinants of FDI. The key variable of interest in the LFDI vector, LPROPERT has a positive and statistically significant effect with an elasticity of 1.09. LPROPERT is a *de jure* property rights index rated on a 0 to 100 scale with higher scores representing more secure formal property rights. The positive coefficient therefore implies that an improvement in the rating of *de jure* property rights in Zimbabwe is associated with an increase in FDI. This supports the theoretical proposition by the NIE that secure property rights encourage FDI by reducing risks, transaction costs and uncertainty.

One plausible transmission mechanism is that the enactment of laws which allow easy expropriation of private property by the government worsens the risk ratings of the country, thereby, discouraging FDI. For example between 2000 and 2003, when the government enacted several laws allowing compulsory acquisition of land with no compensation to the land owners, the World Bank risk premium on investment in Zimbabwe jumped from 3.4% to 153.2%. Earlier studies by Gastanaga *et al* (1998), Li and Resnick (2003), Fedderke and Romm (2006) and Asiedu (2005) also found a positive link between FDI and secure property rights for different countries.

**Table 3.7: Long-run and Short-run Parameter Estimates**

	(A)		(B)		(C)		(D)	
Long-run Parameter Estimates								
Dependant Variable	LFDI	LGDP	LFDI	LGDP	LFDI	LGDP	LFDI	LGDP
LFDI	-1	0.736 (1.61)	-1	0.651* (3.25)	-1	0.644** (1.74)	-1	0.679* (2.02)
LGDP	1.015* (2.12)	-1	1.014* (2.08)	-1	1.076** (1.95)	-1	0.294 (1.01)	-1
LRATIO	-1.666* (2.59)	0.693* (2.85)	-1.679* (2.56)	0.663* (4.48)	-1.677* (2.58)	0.671* (4.13)	-1.107* (4.20)	0.693* (4.18)
LEDEBT	-0.257* (2.99)	0.000	-0.261* (2.99)	0.0000	-0.256* (3.01)	0.0000	-0.169* (6.05)	0.0000
LEDUC	0.655** (1.81)	0.788** (1.78)	0.66** (1.92)	0.773** (1.88)	-0.674** (1.76)	0.863 (1.32)	0.372* (2.34)	0.749 (1.43)
OPEN	0.000	1.502** (1.88)	0.000	1.422* (2.55)	0.000	1.497** (1.92)	0.000	1.591* (2.24)
LPROPERTZ	1.074* (2.02)	0.055 (0.15)	1.093* (2.05)	0.0000	1.046* (2.03)	0.0000	----	----
LPRFHZ	----	----	----	----	----	----	0.654* (3.26)	0.0000
TREND	0.081* (2.99)	0.074** (2.16)	0.081* (3.17)	0.071* (2.61)	0.079* (3.19)	0.071** (1.97)	0.081* (5.16)	0.076* (2.23)
LR Test of restrictions	----	----	$\chi^2(1) = 0.265[0.871]$ Accepts restriction		$\chi^2(1) = 0.001[0.974]$ Accepts restriction		$\chi^2(1) = 0.205[0.651]$ Accepts restriction	
Short-run Parameter Estimates								
$ECT1_{t-1}$	-0.029* (3.98)	0.059 (1.48)	-0.029* (3.98)	-0.060 (1.51)	-0.027* (3.82)	0.074** (1.78)	0.045* (3.74)	0.085 (1.18)
$ECT2_{t-1}$	-0.042* (5.92)	-0.094* (2.46)	-0.043* (5.86)	-0.09* (2.48)	0.035* (4.99)	-0.111* (2.77)	-0.039* (5.28)	-0.073** (1.79)
LINVERSION	-0.02** (1.89)	-0.169** (2.70)	-0.022** (1.89)	-0.169* (2.72)	-0.028* (2.55)	-0.157* (2.48)	-0.022** (1.77)	-0.161* (2.32)
70sWAR	0.009 (1.37)	-0.092** (2.37)	0.009 (1.38)	-0.092* (2.37)	0.013 (1.27)	-0.102* (2.58)	0.014** (1.85)	-0.071 (1.71)
Structural break dummy variables	D98 DU74 DEDUC		D98 DU74 DEDUC		D98 DU74 DEDUC		D98 DU74 DEDUC	
Other Dummy Variables	----		----		1976-1992		----	

Notes: 1) Figures in round and square brackets are absolute t-statistics and p-values respectively. 2) \* and \*\* denotes significance at 5% and 10% respectively.



LRGDP has a positive and significant effect with implied elasticity of 1.01. This confirms the market size hypothesis which says that larger markets are a source of economies of scale. This enhances returns to investment thereby attracting FDI. Our result is similar to that of Mafusire (2004) who obtained a positive and significant relationship between GDP and FDI inflows in Zimbabwe for the period 1967 to 1994. The finding also confirms Asiedu's (2005) results of a positive relationship between FDI and GDP for a group of 22 African countries, including Zimbabwe.

LEDEBT has a negative and statistically significant long run coefficient of -0.26. This supports the notion that increasing government external debt burden results in uncertainty regarding future policy towards foreign capital, which will discourage FDI. Besides, a high government external debt burden may be an indication of weak macroeconomic policies by the Zimbabwean Government. Ramirez (2005) also obtained a negative and statistically significant relationship between Chile's external debt and FDI stock.

LRATIO has a negative and statistically significant coefficient of -1.66. This suggests that FDI inflows are biased towards sectors with low capital intensity. The direct implication of this finding is that FDI is dominated by vertical FDI searching for low labour costs. LEDUC has a positive and significant coefficient of 0.65 indicating that human capital acts as pull factor of FDI by providing necessary skills for efficient production.<sup>48</sup>

Regarding the political instability dummy variables, LINVERSION has a negative and statistically significant coefficient of -0.02. and 70sWAR is statistically insignificant. The negative link between LFDI and political instability is consistent with results of Schneider and Frey (1985) who found that political instability reduces FDI inflows for a group of middle-income and low-income countries.

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<sup>48</sup>See for example Globerman and Shapiro (2002) and Asiedu (2005) for the same result.

We now turn to the LGDP vector represented in equation 28. Although the LGDP vector is likely to be underspecified, all variables carry the *a priori* expected signs. LFDI and LEDUC have positive and significant effects of 0.65 and 0.77 on LGDP respectively. This supports the Borensztein *et al* (1998) notion that FDI has productivity-enhancing effects when the host country absorptive capacity, measured by its stock of human capital, is high. As expected, capital intensity (LRATIO) and trade openness (OPEN) contribute positively to GDP with coefficients of 0.66 and 1.42 respectively.

The dummy variables, LINVERSION and 70sWAR, have negative and statistically significant coefficients equal to -0.169 and -0.092 respectively. The impact of LINVERSION outweighs that of 70sWAR. This implies that the war-time political instability was less detrimental to output when compared to land inversion which occurred between the end of 1999 and 2003.

We now check for the robustness of the long-run parameter estimates. First, we include a dummy variable which takes a value of one between 1976 and 1992, a period during which no significant new foreign capital inflows were realised. We assume the same just-identifying and over-identifying restrictions as in the base-line model. The parameter estimates are shown column C of table 3.7. Our earlier results are robust to the inclusion of this dummy variable. In the cointegrating vector of interest, the LFDI vector, LPROPERT carries a positive and significant effect on LFDI. All other variables maintain the signs they had in the baseline model. Changes only occur in the magnitudes of the estimates.

Secondly, we use an alternative property rights index denoted LPRFH instead of LPROPERTZ to proxy for property rights. LPRFH is the log of the property rights index in the freehold tenure system in which all MNCs own their properties, including farms and mines. The difference between LPRFH and LPROPERTZ is that the latter only tracks

formal laws governing property rights in the freehold tenure system, whereas the former tracks formal laws regulating ownership in all tenure systems including those that are not necessarily market-based. The results are reported in column D of table 3.7. Again, the just-identifying and over-identifying restrictions are the same as in the baseline model.

The results in the LFDI vector show that property rights have a positive and significant effect on FDI with an elasticity of 0.65. The magnitude of the impact is, however, lower than that of the original property rights index. All other variables in the LFDI vector maintain their signs as in the baseline model but, the magnitudes of impacts are slightly lower when compared to the baseline model. In the LGDP vector, only the magnitude of the variables changed but all signs are maintained as in the baseline model.

### 3.6. Conclusion

The chapter sets out to examine the impact of property rights on FDI in Zimbabwe for the period 1964 to 2005 using the Johansen VECM technique. For this purpose, the study employs the variables identified by the literature as important in explaining FDI together with the newly constructed *de jure* property rights index to proxy property rights in Zimbabwe.

An extensive study of the literature was carried out to inform the specification of the long-run relationships to be estimated. The *a priori* specification was complemented by the PSS F-test to test for the forcing and outcome variables. Following this, the Johansen methodology was used to test for the number of cointegrating relationships and to estimate the long-run parameters and adjustment parameters for the Zimbabwean FDI function. Robustness checks for the long run parameter estimates were also carried out.

There are two salient features emanating from the empirical investigations of this chapter. Firstly, the results indicate that property rights significantly affect FDI positively. The finding

is robust to the use of an alternative *de jure* property rights index. Even after controlling for periods of no significant new foreign capital inflows, property rights were consistently an important explanatory variable of FDI in Zimbabwe.

However, the study does not find evidence of feedback effects from FDI to the *de jure* property rights index. This resolves the concerns raised by Benassy-Quere *et al* (2007) that most studies do not account for the problem of endogeneity which arises when there is reverse causality between institutions and FDI.

Secondly, non-institutional determinants of FDI were also found to be important. It was shown that GDP has a positive impact on FDI. Results also supported the presence of feedback effects from FDI to GDP confirming the notion that FDI has some productivity-enhancing effects in the host country. In addition, the external debt burden, capital intensity and political instability have negative and statistically significant effects on FDI. Human capital positively affects both FDI and the GDP.

Overall, the study suggests that property rights, political instability and macroeconomic variables jointly affect the levels of FDI stocks. The main policy implication of the study is that the political elite should ensure that the institutional structure protects the property rights of the broad cross-section of the society so as to promote FDI.

Another policy suggestion is that neither institutional reforms nor macroeconomic adjustment alone can effectively induce FDI. Rather, policy should be aimed at achieving macroeconomic, institutional and political stability to improve the attractiveness of the country to foreign investors.

Furthermore, policy should also target investment in human capital not only because it attracts FDI, but also because it enhances the FDI-absorptive capacity of the host country and the possibility of FDI spill-over effects on the domestic economy.

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## Chapter 4

### 4. The composition of foreign capital stocks in South Africa:

#### The role of institutions and risk.

##### 4.1 Introduction

Since the political transformation of 1994, South Africa has attracted low levels of FDI but considerable amounts of portfolio investment. On average, between 1994 and 2002, FDI inflows amounted to 1.5% of GDP per year, whereas portfolio investment inflows totalled about 3.5% of GDP. The composition of South Africa's inward foreign capital flows raises important questions given that it contrasts sharply with the country's pre-1994 composition of foreign capital inflows. Ahmed *et al* (2005) similarly points out that the domination of portfolio investment inflows in South Africa deviates from the experience of other emerging middle-income countries where FDI tends to outweigh portfolio investment.

While foreign capital inflows are an important means of financing investment in the host country, it has become clear that the sudden disappearance of foreign capital inflows can result in crises (Calvo and Reinhart, 1996). It has therefore been argued that the composition of foreign capital inflows received by a country determines whether these inflows are beneficial or detrimental to the host country (Dooley and Warner, 1995).

FDI is often considered superior to portfolio flows and foreign loans as it potentially facilitates the transfer of new technology; helps improve workers' skills and market access by the recipient country (Borensztein *et al.* (1998). Furthermore, FDI is generally considered to be more stable and resilient during periods of financial stress than portfolio investment inflows. According to this view, a rising relative share of FDI in total foreign capital inflows

is a sign that the recipient country is less prone to financial crises and generally in good health.

There is however a new strand of literature, a branch of the NIE, which argues that the relative share of FDI in total foreign capital inflows tends to be lower in countries that are safer, more promising and have better institutions and policies.<sup>49</sup> Hausman and Fernandez (2000) argued that while the absolute levels of foreign capital inflows tend to be high in countries that are safer and have better institutions and financial markets, a high relative share of FDI in total flows is not an indication of good economic health. On the contrary, they argue that countries that are riskier, less financially developed and have weak institutions tend to attract relatively more capital in the form of FDI.

This argument is based on the notion that FDI is less subject to expropriation than other forms of foreign capital inflows. This is mainly because FDI is of an intangible nature (technology and brand names) and thus difficult to expropriate. Countries that have tighter financial constraints and weak institutions will therefore finance themselves primarily through FDI which is seen as harder to expropriate by foreign investors.

Using a sample of high-income, middle-income and low-income countries, Hausman and Fernandez-Aris (2000) found evidence supporting their argument that countries with high risk and poor institutional quality tend to attract more of their flows in the form of FDI compared to other foreign capital flows. These findings support the claim that FDI is less appropriable when compared to other forms of foreign capital flows. In view of the above argument, interpreting the rising relative share of FDI in total foreign capital inflows as a sign of good economic health is unwarranted.

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<sup>49</sup>See for example Razin *et al* (1998), Hausman and Fernandez-Arias (2000), Albuquerque (2003) and Faria and Mauro (2004).

Given the two contesting views on the desirability of a rising relative share of FDI in total foreign capital inflows, it becomes very important to understand the link between the composition of foreign capital inflows and the host country's institutional quality and risk. While FDI may be relatively stable compared to other flows, its domination in total foreign capital inflows may simply be an indication of institutional weaknesses and high domestic risk in the host country. In that case, the persistently falling relative share of FDI in total foreign capital inflows would not necessarily be a bad sign, since it could be associated with a decline in country risk and institutional inefficiency.

The existing empirical literature on foreign capital in South Africa focuses on the determination of the absolute levels of foreign capital inflows and stocks without paying attention to the composition of those foreign capital inflows and stocks.<sup>50</sup> The purpose of this chapter is to explore the determinants of both the absolute levels and the composition of foreign capital stocks in South Africa for the period 1960 to 2005. The study focuses on the composition of foreign capital stocks (foreign liabilities) rather than foreign capital inflows because it is concerned with long-run effects rather than short-run effects. Foreign capital stocks show the accumulated foreign capital inflows and reveal the long term inward foreign investment position of a country (Read, 2007).

Particular attention will be given to the role of institutional quality and risk as potential determinants. Institutional quality is proxied by the quality of formal property rights in the host country. The notion of risk used is fairly broad and incorporates not only domestic risk but also neighbourhood effects. Neighbourhood effects simply refer to the systematic contagion across boundaries such that favourable or unfavourable characteristics of neighbours may importantly influence a country's own long-run economic performances (Easterly and Levine, 1998).

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<sup>50</sup>See for example Wesso (2001), Fedderke and Liu (2002) and Fedderke and Romm (2006).



The study will investigate the possibility of neighbourhood effects from Zimbabwe to South Africa. The two countries have enjoyed strong trade and business ties for many decades. Zimbabwe is one of the 15 countries with which South Africa exchanges the highest volume of trade globally. Again, South Africa's biggest firms have investments, subsidiaries and interests in Zimbabwe. According to Games (2006), close to 27 of South Africa's biggest listed firms have operations in Zimbabwe and some of them are also listed on the Zimbabwe Stock Exchange (ZSE). The existence of such close economic ties provides channels through which institutional and economic changes in Zimbabwe can be transmitted to the South African economy. The chapter will thus investigate whether the quality of institutions in Zimbabwe, proxied by a *de jure* property rights index, significantly affect the absolute levels and composition of South Africa's foreign capital stocks.

The rest of the chapter is organised in the following manner. Section 4.2 presents a brief overview of the foreign capital in South Africa. This is followed by a review of both the theoretical and empirical literature in section 4.3. Section 4.4 discusses the measurement of domestic risk which is an important control variable in the study. Section 4.5 details the empirical methodology and data used in the study. The empirical findings and discussion of the results are presented in section 4.6. Section 4.7 concludes the chapter with a summary of the findings and policy implications.

## **4.2. A Brief Background to Foreign Capital in South Africa**

The South African monetary authorities distinguish between three main sub-components of total foreign capital inflows. The first category is long term FDI which involves investment in a firm where foreign investors have at least 10% of voting rights. The second category, namely portfolio investment, includes the purchase by foreigners of South Africa's bonds and

equities with less than 10% voting rights. The third category, other investments, constitutes foreign loans and deposits between companies, banks and the government.

South Africa's political democratisation in 1994 saw its re-integration into the world economy. This was accompanied by a surge in the international capital inflows turning South Africa's mid-1970s to 1994 negative net total capital inflows into positive net total inflows. Table 4.1 below presents the net total foreign capital inflows as well as the net inflows for the three sub-components. It is worth noticing that in the post-1994 period, South Africa's net total foreign capital inflows were positive except in 2001 and 2003. By contrast, prior to 1994, the country experienced negative net total capital inflows for a sustained period of time.

**Table 4.1: South Africa's Net Foreign Capital Inflows as a percentage of GDP**

Net capital inflows as % of GDP				
Year	Net total	Net FDI	Net Portfolio investment	Net other Investment (short and long term loans)
1960-1969	0.97	0.66	0.04	0.26
1970-1979	0.48	-0.29	0.18	0.60
1980-1989	-0.75	-0.19	-0.12	-0.45
1990	-0.30	-0.09	0.01	-0.21
1991	-0.94	0.03	0.20	-1.18
1992	-0.61	-1.48	1.33	-0.46
1993	-1.29	-0.22	0.57	-1.64
1994	0.74	-0.63	2.08	-0.71
1995	3.81	-0.83	1.65	2.99
1996	1.71	-0.16	1.55	0.31
1997	3.79	0.99	4.46	-1.66
1998	1.99	-0.91	2.74	0.15
1999	2.38	-0.06	6.43	-3.99
2000	0.21	0.46	-1.50	1.24
2001	-2.28	8.41	-6.63	-4.06
2002	1.06	1.77	-0.37	-0.34
2003	-1.15	0.10	0.52	-1.77
2004	3.28	-0.26	2.91	0.62
2005	4.93	2.36	1.94	0.63
2006	5.86	-2.82	7.42	1.26
2007	7.55	0.91	4.17	2.47

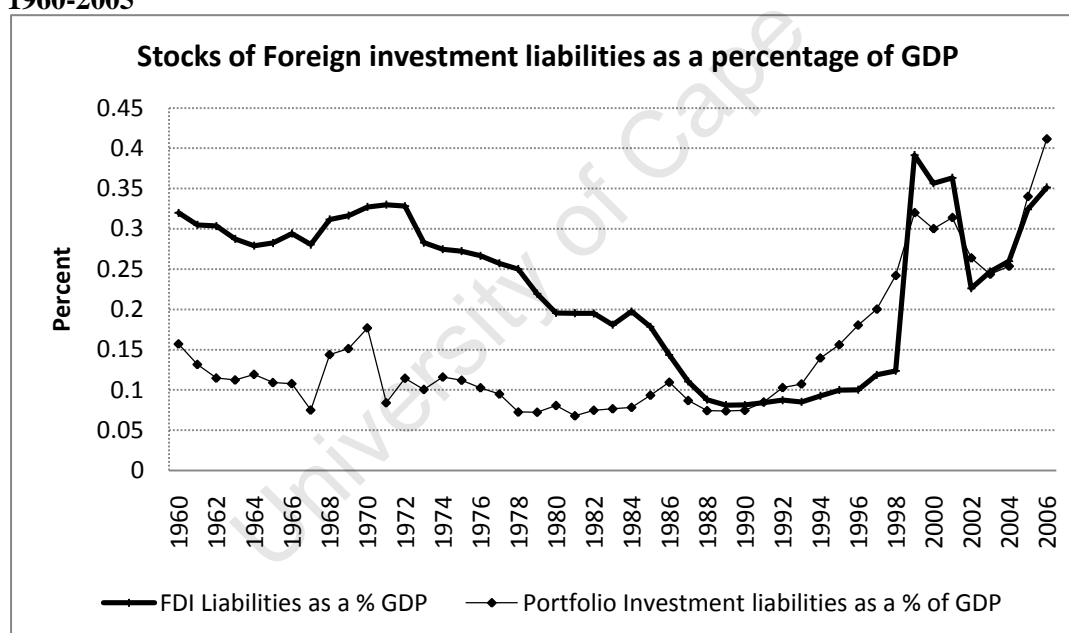
Source: SARB Database.

Fedderke and Liu (2002) computed three different measures of capital flight for South Africa with varying degrees of accuracy. They established that from the mid-1970s to 1995, the period when net capital inflows were negative, South Africa experienced foreign capital

flight. The three measures indicated that capital flight increased sharply following political shocks such as the Soweto riots of 1976 and the failure to opt for political liberalisation in the so called Rubicon Speech of 1985 (Fedderke and Liu, 2002).

In addition to the changes in the levels and direction of foreign capital inflows, South Africa also experienced changes in the composition of its foreign capital inflows and stocks. Figure 4.1 shows the FDI and portfolio investment liabilities as percentage of GDP. It is evident that prior to 1990, FDI liabilities exceeded portfolio investment liabilities by a sizable margin. This contrasts with most of the post-1990 period when portfolio investment liabilities outweighed FDI liabilities.

**Figure 4.1: South Africa's FDI and Portfolio Investment Liabilities as a Percentage of GDP, 1960-2005**



Source: SARB Database.

The only exception to the domination of portfolio investment liabilities in the post-1990 era was between 1999 and 2001, a period during which FDI stocks seem to have grown much faster than portfolio investment stocks. However the growth of FDI stocks was not due to new FDI inflows, but rather the growth was due to the fact that four of South Africa's largest MNCs moved their major listing from the Johannesburg Stock Exchange to the London Stock

Exchange.<sup>51</sup> The London listing requires that the company moves its headquarters to London and registers as a UK Company (Heese, 2000). The South African plants of these firms thus became part of South Africa's FDI liabilities by means of book entry thus inflating the growth of the FDI liabilities.

It follows that there is a shift in the composition of South Africa's foreign liabilities away from FDI to portfolio investment in the post-1990 period. To understand the implication of the composition of foreign liabilities for economic development, it is crucial to establish how the composition is linked to the host country's institutional environment and domestic risk. In the next section, we present a review of the theoretical and empirical literature on the determination of the composition of foreign capital inflows and stocks.

## **4.3 Literature Review**

### **4.3.1 Theoretical Literature Review**

The portfolio diversification literature predicts that weak institutions and domestic risk tend to reduce the absolute levels of FDI and portfolio investment.<sup>52</sup> The theories, however, do not make any clear predictions on how institutions and risk affect the composition of foreign capital inflows and stocks.

There is a strand of literature that has brought the composition of capital flows and stocks to the forefront of the debate on capital movements. The literature borrows heavily from the corporate finance literature, which analyses the capital structure of firms. The corporate-finance based models make clear predictions on how the host country's institutional

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<sup>51</sup> Billiton, Anglo American, South African Breweries and Old Mutual, listed in London in 1999 while Didata, (an information technology firm) followed suit in 2000, and Richemont moved its major listing to Switzerland (Ernst & Young, 2001).

<sup>52</sup> Kraay *et al* (2000) and Fedderke (2002).

arrangements and domestic risk can affect the composition of foreign capital inflows and stocks.

The literature attempts to explain why, in the presence of institutional weaknesses and high domestic risk, foreign investors may prefer to invest through FDI rather than portfolio investment and international loans. According to this theory, the feature that distinguishes FDI over other foreign capital inflows is the element of control that foreign investors enjoy over a group of assets in the host country. Because increased control may alleviate the adverse consequences of asymmetric information and poor investor rights, investors may prefer FDI over portfolio investment.

Gorden and Bovenberg (1996) argued that greenfield FDI is attractive because it is less prone to asymmetric information and problems than other types of investment in which the foreign agent must rely on domestic owners for information. The Gordon-Bovenberg model was extended by Razin *et al* (1998) by considering how different degrees of informational asymmetries and differences in tax treatments may affect the composition of foreign capital inflows.

Razin *et al* (1998) foresees a pecking order in countries' liabilities where countries finance themselves first through FDI, then debt and portfolio capital. This is mainly because foreign MNCs would favour placing their own managers in the recipient country, thus investing abroad through FDI in order to circumvent informational barriers. The theory predicts that more severe informational asymmetries and institutional weaknesses will lead to a larger share of FDI in total external liabilities.

Albuquerque (2003) developed an enforcement model where FDI has a risk-sharing advantage over other capital flows because it contains more intangible assets such as human and organisation capital that are inalienable. This makes FDI less attractive to expropriate

when compared to non-FDI foreign investment. The model then assumes that international capital flows are subject to expropriation due to the lack of international enforcement mechanisms. Because of expropriation risk, capital flows command a default premium. Inalienability of FDI implies that if the recipient country expropriates FDI, the residual value they obtain is relatively small. However, other forms of foreign capital inflows, such as bank loans and bond financing, are fully appropriable. The default premium associated with FDI is thus much smaller than other forms of investment. The optimal contract implies that the share of FDI in total foreign investment is higher for financially constrained countries with high expropriation risk.

#### 4.3.1.1 The Albuquerque (2003) Model

The model assumes that:

- An international investor makes a choice amongst the following three alternative investment opportunities.
  - i. Investing in the international bond market which offers a constant interest rate  $r$ .
  - ii. Investing in an inalienable project called FDI and denoted by  $k_f$  in a chosen host country.
  - iii. Investing in an alienable project called non-FDI and denoted by  $k_o$  in a chosen host country.
- Output from FDI activity will be lost if the host country defaults. Only a share of the current revenues  $\theta \in [0,1]$  can be transformed into investment towards appropriable activity or consumption. Thus  $1 - \theta$  is the degree of inalienability of FDI.

At the outset, the long term contract assigns a utility level  $V$  to the recipient or host country. This life-time utility is obtained through a period utility  $\ln(c)$  and a continuation value  $V(s')$  where  $c$  is the domestic consumption and  $s'$  is a one-period shock. Examples of shocks

include an upset to factor productivity, exchange rate or banking system in the host country. The occurrence of such a shock increases the possibility that the recipient country may default on its foreign liabilities. Without defaulting, the recipient country's utility function is given by:

$$V = E \left[ \ln c + \frac{1}{1+r} V(s')/s \right], \quad (29)$$

The host country's aggregate resource function is given by:

$$c + (1+r)(k_f + k_o) + \tau(s') = s' A k_f^{\alpha_f} + s' k_o^{\alpha_o} \quad (30)$$

The aggregate resource function specifies how the country's output is divided between domestic consumption ( $c$ ), the repayment of the loans from investors and accrued interest,  $(1+r)(k_f + k_o)$  and any additional transfers to foreign investors,  $\tau(s')$ . These transfers may include additional interest charges to cover the default premium.

The utility of the international investor is the expected sum of discounted net flows at the interest rate  $r$  from the borrowing country:

$$B(V, s) = \max_{c, k_f, k_o, \tau, V(s')} \underline{V} E \left[ \tau(s') + \frac{1}{1+r} B(V(s'), s')/s \right] \quad (31)$$

The participation constraints for both the recipient country and the international investors require that utility under the contract is at least as large as the utility outside the contract.

Optimisation of the investor's problem subject to all constraints yields first order conditions which dictate the optimal composition of foreign capital flows in the host country and specified in equations 32 and 33.

$$E(s'/s) A \alpha_f k_f^{\alpha_f-1} = 1 + r + E[\psi(s') U_{k_f}(k_f, k_o, s')/s] \quad (32)$$

$$E(s'/s) A \alpha_o k_o^{\alpha_o-1} = 1 + r + E[\psi(s') U_{k_o}(k_f, k_o, s')/s] \quad (33)$$

$U(k_f, k_o, s')$  is the recipient country's utility under autarky (outside the contract). Although the model is set up in the context of foreign capital inflows, its predictions can be extended to foreign capital stocks. This is because foreign capital stocks show the accumulated foreign capital inflows over time.

### The Perfect Enforcement Solution

Before analysing the role of imperfect enforcement and inalienability of FDI, we look at the perfect enforcement solution. Perfect enforcement of international contracts implies that participation constraints are not binding and the first order conditions can be simplified to:

$$\alpha_f E(s'/s) A k_f^{\alpha_f - 1} = \alpha_o E(s'/s) A k_o^{\alpha_o - 1} = 1 + r \quad (34)$$

Equation 34 implies that in an economy with perfect enforcement where the default premium is zero, marginal revenues are equalised across three forms of investment. Inalienability plays no role in the determination of the composition of capital flows. Hence, the role of inalienability in determining the composition of foreign capital inflows is directly linked to the existence of borrowing constraints.

### The Imperfect Enforcement Solution

With financing frictions in place, the default premium or country risk becomes positive for both the FDI and non-FDI projects. In this case, equations (33) and (34) reproduced below determine the composition of foreign capital flows.

$$E(s'/s) A \alpha_f k_f^{\alpha_f - 1} = 1 + r + E[\psi(s') U_{k_f}(k_f, k_o, s')/s]$$

$$E(s'/s) A \alpha_o k_o^{\alpha_o - 1} = 1 + r + E[\psi(s') U_{k_o}(k_f, k_o, s')/s]$$

International investors optimise their returns when the marginal expected revenue of all foreign capital is equated to its marginal costs,  $r$ , plus a default premium. The default



premium for each  $k_x$  is given by  $E[\psi(s')U_{k_x}(k_f, k_o, s')]$  and it measures the cost of higher incentives to default brought about by a marginal unit of capital. Since the default premium is higher for non-FDI flows, the solution will be such that the level of FDI is no smaller than the level of appropriable capital,  $k_f^* \geq k_o^*$ . Furthermore both flows will be below their perfect enforcement levels ( $k_*^F$ ) so that  $k_f^* \leq k_f^F$ , and  $k_o^* \leq k_o^F$ , with the inequality holding strictly every time the country is constrained.

The above result yields the main prediction of the model concerning the default premium and the level of FDI versus other flows. The prediction is that the relative share of FDI in total foreign inflows and stocks is higher for financially constrained countries if  $\theta < 1$ , that is when FDI is partially inalienable.

The Albuquerque (2003) prediction that riskier countries with poor institutions and high risk receive most of their foreign capital flows in the form of FDI rather than portfolio investment or foreign loans is not totally unquestioned. This is because the result is based on the partial inalienability of FDI. Faria and Mauro (2004) argued that inalienability of FDI depends upon the sectoral allocation of FDI. They further argued that FDI in developing countries has mostly been concentrated in capital-intensive sectors and/or the primary commodities sector where the host country can easily expropriate foreign capital.<sup>53</sup> In such a situation, the inalienability of FDI is not satisfied. Albuquerque's theory may apply mostly to FDI in high technology or human capital-intensive sectors where the benefits of expropriating foreign capital by the host country are very low thus making FDI sufficiently inalienable.

The above theoretical review clearly shows that the rising relative share of FDI in total foreign capital inflows and stocks could be a result of high domestic risk and institutional inefficiencies related to information barriers and expropriation risk. This is, however, subject

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<sup>53</sup> See for example the argument in Eaton and Gersovitz (1989).

to the condition that FDI is less appropriable, when compared to portfolio investment and foreign loans.

#### **4.3.1.2 Neighbourhood Effects and Foreign Capital Flows**

In addition to domestic risk, foreign capital flows are also affected by neighbourhood effects. According to Easterly and Levine (1998), neighbourhood effects refer to the systematic contagion across boundaries such that favourable or unfavourable characteristics of neighbours may influence a country's own long run economic performance. In the context of foreign capital movements, contagion occurs when political and economic events in the progenitor country affect the absolute levels and the composition of foreign capital in the neighbouring countries.<sup>54</sup>

There are two strands of literature that explain how contagion takes place. The first strand of literature focuses on fundamental economic channels through which contagion takes place, and the second strand of literature stresses the herding behaviour on the part of economic agents in the propagation of contagion.

Rigobon and Forbes (2000) identified three fundamental economic channels through which a crisis in one country can be propagated to its neighbours. These include close trade links, similar initial economic conditions between countries and financial linkages. However, when contagion is driven by investor herding behaviour or sentiment alone, the crisis propagation is transferred between markets even in the absence of real market links.

Based on the theoretical literature review, two testable hypotheses can be identified:

- i. Poor institutional quality, high domestic risk and negative neighbourhood effects reduce the absolute levels of FDI and portfolio investment stocks.

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<sup>54</sup> See for example Calvo and Reinhart (1996).

- ii. If  $\theta < 1$ , poor institutional quality and high risk will increase the relative share of FDI in total foreign capital stocks. This occurs as investors shift their investment away from portfolio investment towards FDI which is seen as less appropriable. This hypothesis will be referred to as the  $\theta$ -hypothesis in the subsequent sections. An alternative hypothesis to the  $\theta$ -hypothesis, is that poor institutional quality and high risk will reduce the relative share of FDI in total foreign capital stocks. This occurs when FDI is concentrated in the capital-intensive or natural resource sectors where inalienability of FDI may not be satisfied.

In the following sub-section, we look at the existing empirical evidence on the link between the composition of foreign capital inflows and stocks on the one hand, and institutional quality, risk and macroeconomic factors on the other hand.

#### **4.3.2 Empirical Literature**

The role of institutional quality and domestic risk in determining the composition of foreign capital inflows and stocks has been under explored in previous studies. The existing limited empirical work yields conflicting results. On the one hand, some studies support the  $\theta$  hypothesis that domestic risk and poor institutional quality tend to increase the relative share of FDI in total foreign liabilities. On the other hand, some studies conclude that domestic risk and institutional inefficiencies will reduce the relative share of FDI in total foreign liabilities.

The pioneering work of Hausman and Fernandez-Arias (2000) considered the determinants of the share of FDI flows in total foreign capital inflows, using averages for 1996 to 1998 for a cross-section of advanced and developing countries. They found a strong, positive and statistically significant relationship between the default risk and the share of FDI in total capital inflows. In contrast, country risk had a negative and statistically significant effect on the absolute levels of total foreign capital inflows. They concluded that riskier countries

receive less foreign capital, but these countries tend to get more of their flows in the form of FDI. With regards to institutional quality, their results showed that the relative FDI share in total capital inflows is strongly and negatively associated with measures of institutional development compiled by Kaufmann *et al* (1999) and with the La Porta *et al* (2000) indices of shareholder rights. They concluded that while good institutions positively affect the volume of capital flows, they skew the composition away from FDI to other flows. Their results support the  $\theta$ -hypothesis.

Albuquerque (2003) considered the determinants of the composition of capital flows for a cross-section of both developed and developing countries for the period 1975 to 1997. With average FDI shares in gross private capital flows as a dependant variable and controlling for GDP *per capita* and trade openness, he found that the ICRG variable of law and order had a negative but insignificant effect. Country risk measured by Moody's sovereign credit ratings had a strong negative effect on the share of FDI in total capital inflows. Since the Moody's credit rating assigns higher scores to countries with lower default risk, the Albuquerque (2003) result implies that good (poor) credit ratings decrease (increase) the share of FDI in total flows. Again, the result supports the  $\theta$ -hypothesis.

In contrast to the above results, Ahmed *et al* (2005) do not find evidence supporting the  $\theta$  hypothesis for a sample of 81 developing countries, including South Africa. They found the share of FDI in total foreign capital inflows to be positively and significantly influenced by the institutional quality measured by the ICRG index of law and order. Since countries that rank high on the ICRG index have high quality institutions, the positive coefficient implies that strong institutions result in FDI dominating foreign capital inflows. Their result does not support the  $\theta$  hypothesis. Besides institutional quality, the study also showed that the share of FDI in total foreign capital inflows tends to be higher in economies with abundant resources and low trade restrictions.

There are some empirical studies that have looked only at the macroeconomic determinants of the composition of foreign capital inflows. For instance, Lane and Milesi-Ferretti (2001a, 2001b) analysed how a number of potential correlates such as trade openness, per capita GDP, stock market capitalisation, market size and natural resources availability affect the composition of countries' foreign liabilities. Using a sample of developing and transition countries that included Sub-Saharan Africa, they found trade openness to be the dominant factor in explaining the share of FDI in total foreign liabilities. Lane and Milesi-Ferretti (2001a) recognised that the limitation of their work was the failure to control for institutional explanatory variables.

Two main hypotheses have emerged from the literature review. The first postulates that institutional inefficiencies and domestic risk including negative neighbourhood effects reduce the absolute levels of FDI and portfolio investment stocks in the host country. To test this hypothesis in the case of South Africa, we investigate the impact of domestic risk, neighbourhood effects and property rights on the absolute levels of FDI and portfolio investment stocks for the period 1960 to 2005.

The neighbourhood effects are captured by including Zimbabwe's *de jure* property rights index as an explanatory variable for the absolute levels of FDI and portfolio investment stocks in South Africa. Our empirical specifications draw from both the theoretical and empirical literature review. Equations 35 and 36 below are estimated separately in order to establish the impact of institutions, domestic risk and neighbourhood effects on the absolute levels of FDI and portfolio investment stocks respectively.

$$LFDI = f \left( \begin{matrix} \text{RISK} & \text{LPROPERT} & \text{LPROPERTZ} & \text{LRGDP} & \text{OPEN} & \text{LAVWAGE} & \text{LRATIO} \\ - & + & + & + & + & - & +/- \end{matrix} \right) \quad (35)$$

$$LPI = f \left( \begin{matrix} \text{RISK} & \text{LPROPERT} & \text{LPROPERTZ} & \text{LRGDP} & \text{RTBR} & \text{CREDIT} \\ - & + & + & + & + & + \end{matrix} \right) \quad (36)$$

LFDI is the log of real FDI stocks, LRGDP is the log of the real GDP, RISK is a measure of default and currency risk, LPROPERT is the log of the South Africa's property rights index, RTBR is the short term real interest rate measured by the 3 months real Treasury Bill rate, OPEN is the sum of exports and imports as a proportion of GDP, LAVWAGE is the log of the average wage rate, LRATIO is the log of the capital-labour ratio, LPROPERTZ is the log of Zimbabwe's property rights index. LPI is the log of real portfolio investment stocks and CREDIT is a proxy for the financial sector development measured by the ratio of the credit issued to the private sector, to GDP.

The three key explanatory variables of interest are RISK, LPROPERT and LPROPERTZ. Our *a priori* expectation is that domestic risk, denoted by RISK, has a negative effect on the absolute levels of FDI and portfolio investment stocks. The quality of property rights in the host country, denoted by LPROPERT, is expected to have a positive effect on the absolute levels of FDI and portfolio investment stocks. These expectations are in line with both the portfolio diversification literature<sup>55</sup> and the NIE literature which postulate that institutional inefficiency and domestic risk reduce the attractiveness of a country as an investment destination for foreign investors.<sup>56</sup>

The quality of property rights in the neighbouring country, in this case Zimbabwe, represents neighbourhood effects and is expected to have a positive effect on the absolute levels of FDI and portfolio investment stocks in South Africa. This is because secure property rights in Zimbabwe can result in positive spill-over effects on South Africa through either the close business linkages between the two countries or through investors herding behaviour.

The other explanatory variables are selected from the past literature. The real GDP, denoted by LRGDP, is expected to have a positive effect on the absolute levels of FDI and portfolio

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<sup>55</sup> See for example Kraay *et al* (2001) and Fedderke (2001).

<sup>56</sup> See for example Gastanaga *et al* (1998) and Dunning (2005).

investment stocks.<sup>57</sup> In this regard, Fedderke and Liu (2002) and Fedderke and Romm (2006) found that GDP has a positive and statistically significant impact on FDI and total foreign capital flows in South Africa. Trade openness, denoted by OPEN, is expected to have a positive effect on FDI stocks.<sup>58</sup> *A priori*, we expect that labour costs, denoted by LAVWAGE, have a negative effect on FDI.<sup>59</sup> The capital-labour ratio, denoted by LRATIO, could have either a positive or negative effect on FDI depending on whether vertical or horizontal FDI dominates.<sup>60</sup>

High real short-term interest rates in the host country relative to other countries tend to attract relatively more short term foreign capital. It is therefore expected that the real Treasury Bill rate has a positive effect on the portfolio investment stocks.<sup>61</sup> CREDIT, a proxy for the financial sector development, is expected to have a positive effect on portfolio investment stocks.<sup>62</sup>

We now turn to the determination of the composition of foreign capital stocks. The second proposition, the  $\theta$ -hypothesis, postulates that domestic risk and institutional weaknesses will increase the relative share of FDI in total foreign capital stocks provided that FDI is less prone to expropriation when compared to portfolio investment.

An alternative hypothesis to the  $\theta$ -hypothesis proposed by Faria and Mauro (2004) is that the relative share of FDI in total foreign capital stocks is negatively affected by institutional inefficiencies and domestic risk. This occurs when FDI is not inalienable and can be expropriated by the host country government. Faria and Mauro (2004) argued that

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<sup>57</sup> See for example Fedderke and Liu (2002) and Fedderke and Romm (2006) for the evidence on the impact of GDP on FDI and total foreign capital inflows in South Africa.

<sup>58</sup> See for example Ahmed (2005) and Fedderke and Romm (2006) on the impact of trade openness on FDI in South Africa.

<sup>59</sup> See for example Fedderke and Romm (2006).

<sup>60</sup> See for example Fedderke and Romm (2006).

<sup>61</sup> See for example Fedderke and Liu (2002) for the evidence on the impact of real short term interest rates on total foreign capital inflows in South Africa.

<sup>62</sup> See for example Ahmed *et al* (2002) on the impact of financial sector development on portfolio investment.

inalienability of FDI is not satisfied when FDI is concentrated in the natural resources-intensive or capital-intensive sectors where the host country government can easily expropriate foreign capital.

The empirical specification to investigate the  $\theta$ -hypothesis in the case of South Africa is again drawn from the literature and is as follows:

$$LFDISHARE = f \left( \begin{matrix} \text{RISK} & \text{PROPERT} & \text{LPROPERTZ} & \text{LRGDP} & \text{OPEN} & \text{RTBR} & \text{CREDIT} \\ + & , & - & , & + & , & + & , & + & , & - & , & + \end{matrix} \right) \quad (37)$$

LFDISHARE is the log of the relative share of FDI in total foreign capital stocks. All the other variables are defined as above. The signs below the variables are the expected *a priori* signs.

If the  $\theta$ -hypothesis is satisfied, risk is expected to have a positive effect on the relative share of FDI in total foreign capital stocks. The quality of property rights in the host country is expected to have a negative effect on the relative share of FDI in total foreign capital stocks.

In terms of the neighbourhood effects, it is expected that Zimbabwe's property rights captured by LPROPERTZ should have positive effect on the relative share of FDI in total foreign capital stocks in South Africa. This would imply that as the property rights in Zimbabwe improve, the relative share of FDI in total foreign capital stocks in South Africa will increase through the spill-over effects.

Regarding the other explanatory variables, GDP is expected to have a positive effect on the relative share of FDI in total foreign capital stocks.<sup>63</sup> *A priori*, we expect trade openness to have a positive effect on the relative share of FDI in total foreign capital stocks.<sup>64</sup> Since relatively high domestic real short-term interest rates in the host country tend to attract

<sup>63</sup> See for example Lane and Milesi-Ferretti (2001a, 2001b) and Ahmed *et al* (2005).

<sup>64</sup> Lane and Milesi-Ferretti (2001a, 2001b), Albuquerque (2003) and Ahmed *et al* (2005).



relatively more short term foreign capital, RTBR is expected to have a negative impact on the relative share of FDI in total foreign capital stocks. Financial sector development, captured by the variable CREDIT, is expected to have a positive effect on the relative share of FDI total foreign capital stocks.<sup>65</sup>

#### **4.4. Measurement of Domestic Risk**

The literature on the composition of foreign capital inflows and stocks emphasises the importance of institutional quality and country risk as potential determinants. The measurement of institutional quality and domestic risk in applied work is, however, met with some difficulties. Earlier in chapter two, we discussed problems associated with the measurement of institutional quality and possible solutions were proposed. In this section, we discuss the measurement of domestic risk and we develop a measure of country risk for South Africa for the period 1960 to 2005.

##### **4.4.1 A brief Review of Alternative Risk Measures**

Generally, domestic or country risk represents the risk that a country will default on its debt obligations. While there are several approaches to measuring domestic risk, two measures are most commonly used.<sup>66</sup>

The first approach is to use subjective indices of country risk that are constructed by organisations such as the Institutional Investor magazine, the International Country Risk Guide, Euromoney magazine and Standard and Poor's Ratings Group. All these indices assess the credit worthiness of a country and are based on surveys of international bankers, international investors and academics. For example, the Country Credit Ratings developed by the Institutional Investor magazine are based on ratings provided by leading international

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<sup>65</sup> See for example Ahmed *et al* (2002).

<sup>66</sup> Rajan and Friedman (2001).

banks. Bankers are asked to grade each country on a scale of 0 to 100, with zero representing the least creditworthy countries and 100 representing the most creditworthy countries and the ones with the least chance of default. The major disadvantage of the above indexes is that they have limited time coverage.

The second approach is to use sovereign spreads, which are measured by the difference between the yield on the government bonds issued by a country and the yield on another default-free government bond such as the USA government bond. Sovereign bonds can serve as a benchmark asset for pricing others risks, since sovereign bonds are generally considered the safest among all classes of assets.

The sovereign bond yield spread measure of country risk is based on Aliber's (1973) reinterpretation of the interest rate parity theorem. The interest rate parity theorem draws on the principle that two investments of the same maturity and exposed to the same risks must have the same returns. Aliber (1973) suggest that deviations from the covered interest parity can serve as a broader measure of country risk because the deviations may result from political risk, imposition of capital controls, cross-boarder differences in taxation and liquidity differences between foreign and domestic securities.

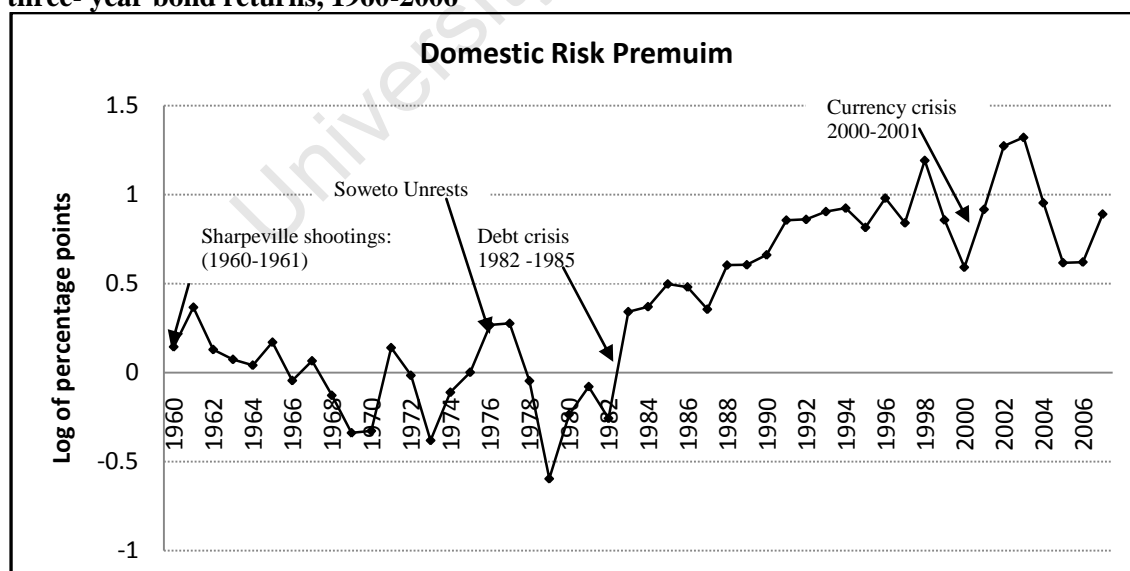
Dooley and Isard (1980), in support of Aliber (1973), argued that deviations from the interest parity reflect exchange rate risk when assets are denominated in different currencies and political risk when assets are issued in different countries with different legal jurisdictions. The political risk premium represents the risk that a country will default on its debt obligation, while the currency risk premium represents the compensation that an investor receives because of the possibility of depreciation in the exchange rate of a local currency bond.

#### 4.4.2 Domestic Risk in South Africa

The preferred measure of domestic risk in this study is one that captures the default risk premium excluding the currency risk. Following the Aliber (1973) framework, the default risk premium can be measured by the spread between the South African dollar denominated government bond yield and the USA government dollar denominated bond yield.<sup>67</sup> However, since South Africa only issued its first dollar denominated bond in 1997, the yearly time series of the risk premium spread has short time coverage. To overcome this problem, Frankel (2007) used the sovereign spread approach to measure South Africa's default risk on a monthly basis.

Because of the above constraint, we measure South Africa's country risk on an annual basis, using the spread between South Africa's three-year Rand-denominated government bond yield and the U.S. three-year Dollar-denominated government bond yield. The sovereign bond yield spread is depicted in figure 4.2.

**Figure 4.2: Domestic Risk Premium: Sovereign spread between the South-African and USA three- year bond returns, 1960-2006**



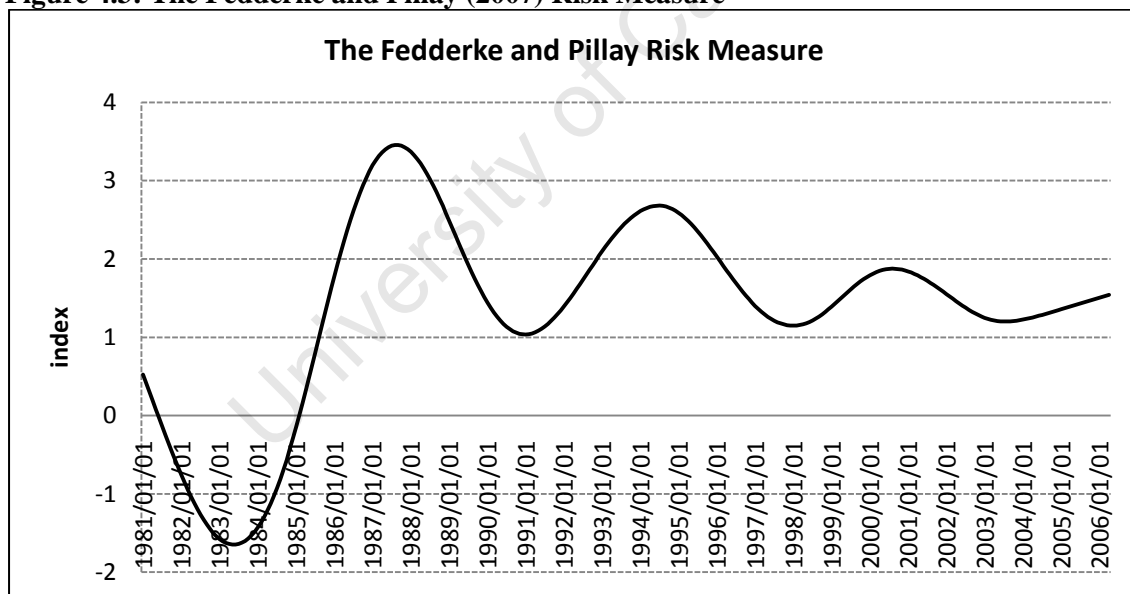
Source: Calculated using Data from obtained from the SARB Database.

<sup>67</sup> The U.S. government bond represents a benchmark for risk-free investment.

The above sovereign spread is a much broader measure of country risk since it contains both the default risk premium and the currency risk premium. In figure 4.3, we show an alternative risk measure constructed by Fedderke and Pillay (2007) for South Africa. The risk measure is a pure measure of default risk which runs from 1981 to 2006 on a monthly basis. In line with the above simple sovereign spread, the Fedderke and Pillay (2007) measure shows increasing default risk in the mid-1980s. However, while the sovereign spread shows a steady increase in risk through out the 1990s, the Fedderke and Pillay (2007) measure indicates decreasing risk in both the run-up to and after the political transformation of 1994.

These differences between the pure risk measure and our simple sovereign spread indicates that the risk measured by the sovereign spread is much broader than the default risk premium and includes other forms of risk such as the currency risk.

**Figure 4.3: The Fedderke and Pillay (2007) Risk Measure**



Source: Fedderke and Pillay (2007:29, Figure 9).

## 4.5. Methodology

### 4.5.1 Empirical Methodology

#### 4.5.1.1 VECM

We employed the Johansen estimation technique outlined in chapter 3 to estimate the structural models for the determinants of the absolute levels of FDI and portfolio investment stocks and the determinants of the relative share of FDI in total foreign capital stocks. In brief, reparametrisation of a standard VAR yields a VECM specification of the following form:

$$\Delta z_t = \sum_{i=1}^{k-1} \Gamma_i \Delta z_{t-i} + \Pi z_{t-k+1} + \mu + \delta_t \quad (38)$$

Where  $z_t$  is a  $n \times 1$  matrix of endogenous variables,  $m$  is the lag length,  $\mu$  is matrix of deterministic terms and  $\delta$  a Gaussian error term.  $H_1(r): \Pi = \alpha\beta'$  tests the hypothesis of the existence of  $r$  cointegrating relationships.

The empirical specifications for the determinants of the absolute levels of FDI and portfolio investment stocks are presented in equations 39 and 40 respectively. In the FDI equation, theory postulates the existence of feedback effects from FDI to output. Borensztein *et al* (1998) argued that FDI enhances productivity and output in the host country. Therefore theoretically, we expect two long run relationships in equation 39, one explaining FDI and the other explaining GDP. In the case of portfolio investment, *our a priori* expectation is of a single cointegrating vector.

$$\Pi z_{t-k+1} = \begin{bmatrix} \alpha_{11} & \alpha_{12} \\ \alpha_{21} & \alpha_{22} \\ \alpha_{31} & \alpha_{32} \\ \alpha_{41} & \alpha_{42} \\ \alpha_{51} & \alpha_{52} \\ \alpha_{61} & \alpha_{62} \\ \alpha_{71} & \alpha_{72} \\ \alpha_{81} & \alpha_{82} \end{bmatrix} \begin{bmatrix} 1 & -\beta_{12} & \beta_{13} & -\beta_{14} & -\beta_{15} & \beta_{16} & 0 & -\beta_{18} \\ -\beta_{21} & 1 & 0 & -\beta_{24} & -\beta_{25} & -\beta_{26} & -\beta_{27} & -\beta_{28} \end{bmatrix} \begin{bmatrix} \text{LFDI} \\ \text{LRGDP} \\ \text{RISK} \\ \text{LPROPERT} \\ \text{OPEN} \\ \text{LAVWAGE} \\ \text{LRATIO} \\ \text{LPROPERTZ} \end{bmatrix}_{t-k+1} \quad (39)$$

$$\Pi Z_{t-k+1} = \begin{bmatrix} \alpha_{11} \\ \alpha_{21} \\ \alpha_{31} \\ \alpha_{41} \\ \alpha_{51} \\ \alpha_{61} \\ \alpha_{71} \end{bmatrix} \begin{bmatrix} 1 & -\beta_{12} & \beta_{13} & -\beta_{14} & -\beta_{15} & -\beta_{16} & -\beta_{17} \end{bmatrix} \begin{bmatrix} \text{LPI} \\ \text{LRGDP} \\ \text{RISK} \\ \text{LPROPERT} \\ \text{RTB} \\ \text{CREDIT} \\ \text{LPROPERTZ} \end{bmatrix}_{t-k+1} \quad (40)$$

The empirical specification for the determinants of the relative share of FDI in total foreign capital stocks is shown in equation 41. Our *a priori* expectation is of one cointegrating vector.

$$\Pi Z_{t-k+1} = \begin{bmatrix} \alpha_{11} \\ \alpha_{21} \\ \alpha_{31} \\ \alpha_{41} \\ \alpha_{51} \\ \alpha_{61} \\ \alpha_{71} \\ \alpha_{81} \end{bmatrix} \begin{bmatrix} 1 & -\beta_{12} & -\beta_{13} & \beta_{14} & \beta_{15} & -\beta_{16} & -\beta_{17} & \pm\beta_{18} \end{bmatrix} \begin{bmatrix} \text{LFDISHARE} \\ \text{LRGDP} \\ \text{RISK} \\ \text{LPROPERT} \\ \text{RTBR} \\ \text{OPEN} \\ \text{CREDIT} \\ \text{LPROPERTZ} \end{bmatrix}_{t-k+1} \quad (41)$$

#### 4.5.2 Description of Variables and Data Sources

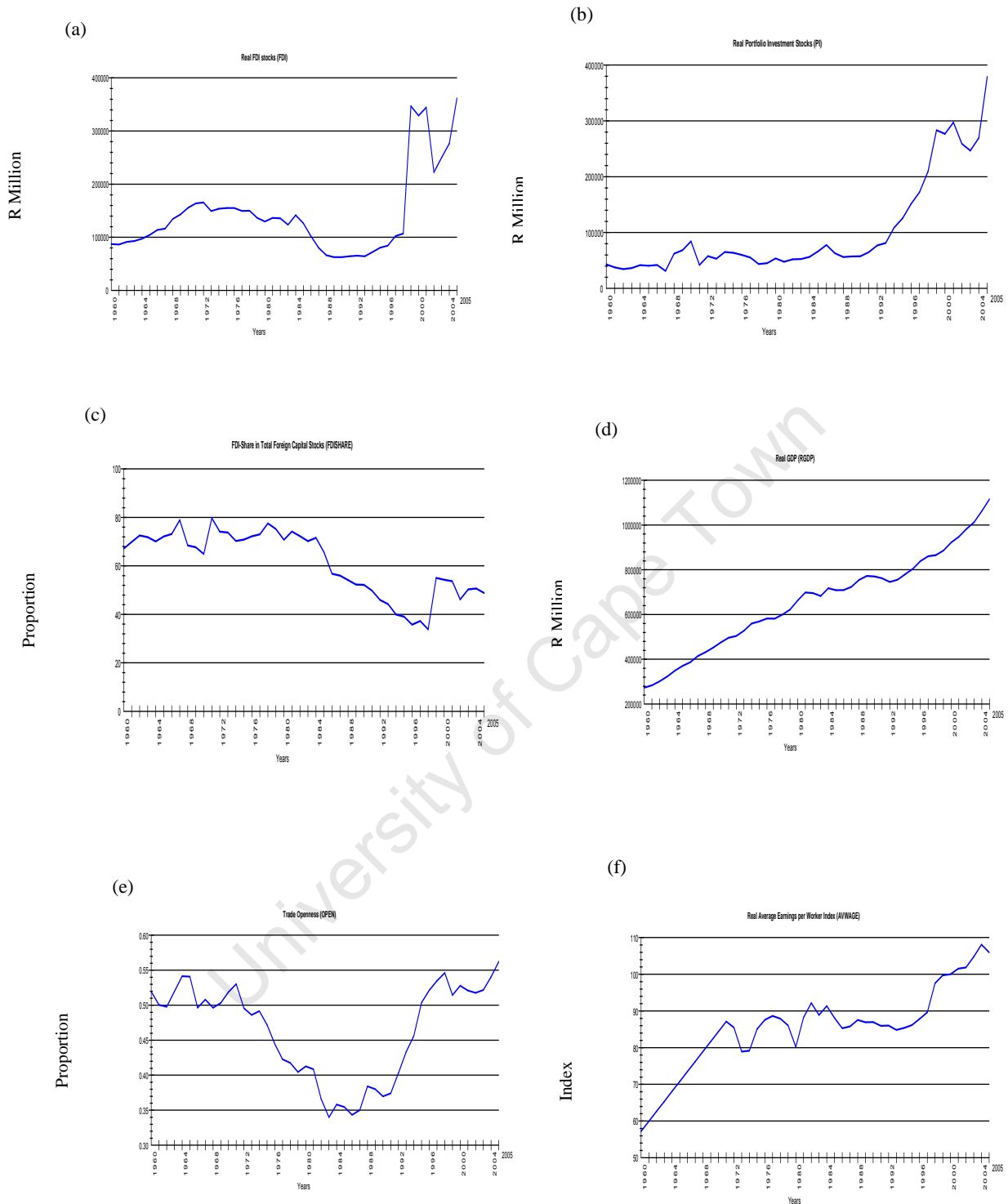
We employ annual time-series data for South Africa for the period 1960 to 2005. Table 4.2 below gives a detailed description of the variables and the data sources. The time-series plots of the variables are shown in figure 4.4.

**Table 4.2: Variable Description and Data Sources**

Variable	Description	Source
LFDI	Log of Real FDI Stocks at 2000 prices	SARB
LRGDP	Log of Real Gross Domestic Product at 2000 prices	SARB
LPI	Log of Real Portfolio Investment Stocks at 2000 prices	SARB
LTI	Log of Real Total Foreign Capital Stocks at 2000 prices	SARB
LFDISHARE	Log of the Ratio of FDI Stocks to Total Foreign Capital Stocks	SARB
RISK	Country risk premium measured by the South Africa-U.S.A. sovereign spread and computed by Log of South Africa's 3 year government bond rate minus log of USA's 3 year government bond rate	SARB
LPROPERT	Log of the Property Rights Index for South Africa	Fedderke <i>et al</i> (2001) <sup>68</sup>
OPEN	$\frac{\text{Exports} + \text{Imports}}{\text{GDP}}$	SARB
LAWVAGE	Log of the Average Wage at 2000 prices	SARB
LRATIO	Log of the Capital-Labor Ratio	SARB
RTBR	Real 91-day Treasury Bill Rate	SARB
CREDIT	Ratio of the Credit issued to the private sector to GDP	SARB
LPROPERTZ	Log of the Property Rights Index of Zimbabwe	Constructed in Chapter two of the thesis
GOLD	Dummy for the gold price boom of 1981-1984	
DFDI	Dummy for the surge in real FDI stocks due to the listing of some South African Multi-Nationals on the London Stock Exchange between 1999 and 2001.	
DPI	Dummy for the surge in real portfolio investment stocks between 2003 and 2005.	

<sup>68</sup>The Fedderke *et al* (2001) property rights index is available from 1950 to 1997. For the purposes of this study, the series was extended to 2005. The extension was done by assuming that the index did not change between 1996 and 2005. This is a reasonable assumption given that there were no substantial changes to the legislation regulating property rights in South Africa between 1997 and 2005.

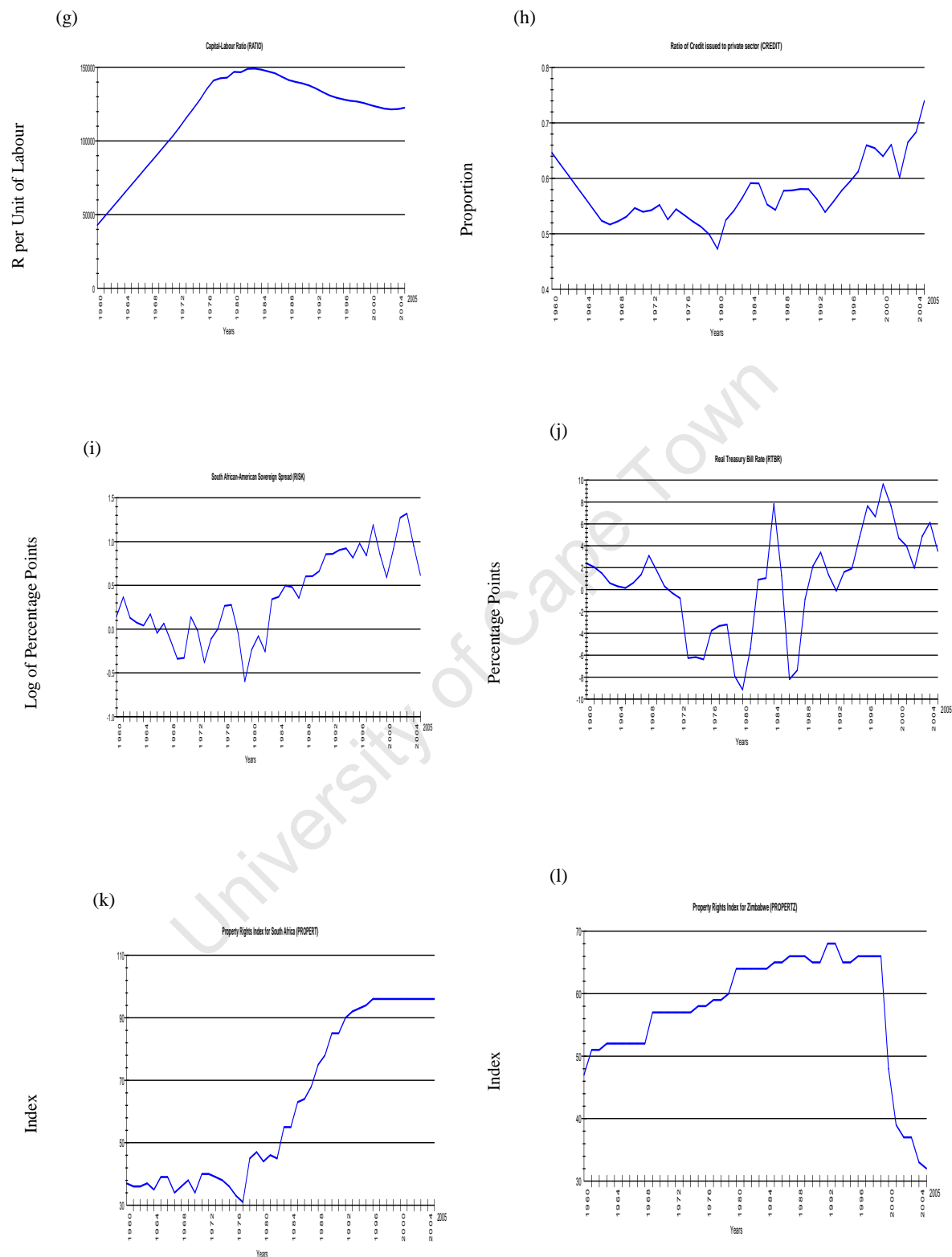
**Figure 4.4: Time-series Plots of the Variables**



Notes: 1) Variable names are in brackets.



Figure 4.4 continued: Time Series Plots of the variables



## 4.6 Findings

### 4.6.1. The Univariate Characteristics of the Data

It is a prerequisite of the Johansen VECM technique that all the variables to be included in a model are  $I(1)$ . We made use of the standard ADF test with a trend ( $\tau_\tau$ ) and without a trend ( $\tau_\mu$ ) to test for unit roots.<sup>69</sup> The results are presented in table 4.3 below

**Table 4.3: ADF Unit Root Tests.**

Variable	Levels		First Difference	
	$\tau_\mu$	$\tau_\tau$	$\tau_\mu$	$\tau_\tau$
LFDI	1.13	-0.89	-3.47*	-4.87*
LRGDP	-0.93	-2.33	-4.09*	-4.00*
LPI	1.80	-1.73	-5.38*	-5.88*
LFDISHARE	-1.59	-1.24	-6.65*	-6.75*
RISK	-1.69	-3.09	-4.61*	-6.01*
LPROPERT	-.077	-1.85	-7.20*	-7.10*
OPEN	-0.75	-0.48	-4.24*	-5.08*
LAWVAGE	-1.11	-2.10	-5.45*	-5.34*
LRATIO	-2.16	-.022	-8.64*	-6.88*
RTBR	-2.18	-3.62*	-4.67*	-5.49*
CREDIT	0.90	-1.31	-5.54*	-4.85*
LPROPERTZ	-0.57	-0.69	-3.91*	-4.53*

Note: \* denotes the rejection of the null of non-stationarity at the 5% level of significance.

It is evident from the above results that all the variables are  $I(1)$  and this renders the Johansen methodology appropriate for our purpose. The next sub-section presents the Johansen tests for cointegration.

<sup>69</sup> Dickey and Fuller (1979).

### 4.6.2 Cointegration Analysis

The Johansen tests for cointegration are conducted under the assumption of unrestricted intercepts and no trends.<sup>70</sup> The order of the VAR in each case is chosen on the basis of the Akaike Information Criteria. Table 4.4 shows the test for cointegration for the FDI model. The maximal eigenvalue statistic indicates that there are two cointegrating vectors and the trace statistic shows that there are three cointegrating vectors. Following the argument in Enders (2004) our choice of the number of cointegrating vectors is based on the maximal eigenvalue statistic which predicts two cointegrating vectors.<sup>71</sup>

The prediction of two cointegrating vectors is also in line with our *a priori* theoretical expectation of two long run relationships, one explaining FDI and the other explaining GDP. While GDP is an important determinant of FDI, Borensztein *et al* (1998) argued that FDI enhances productivity and output resulting in some feedback effects from FDI to output.

**Table 4.4: Maximal Eigenvalue and Trace Statistics for Cointegration for the FDI model**

Unrestricted intercepts and no trends, Order of the VAR = 2				
Null	Alternative	Max Eigen Value	90% Critical Value	95% Critical Value
$r = 0$	$r = 1$	83.1450*	45.6300	42.7000
$r \leq 1$	$r = 2$	62.9767*	39.8300	36.0200
$r \leq 2$	$r = 3$	30.3070	33.6400	31.0200
$r \leq 3$	$r = 4$	20.9323	27.4200	24.9900
Null	Alternative	Trace Value	90% Critical Value	95% Critical Value
$r = 0$	$r = 1$	221.5186*	124.6200	119.6800
$r \leq 1$	$r = 2$	138.3736*	95.8700	91.4000
$r \leq 2$	$r = 3$	69.3969*	70.4900	65.2300
$r \leq 3$	$r = 4$	45.08	46.8800	35.7500

Notes: \* denotes rejection of null at the 5% level of significance.

Tables 4.5 and 4.6 show the Johansen tests for cointegration for the portfolio investment stocks and the relative FDI-share models respectively. Again, following the argument in Enders (2004), we make use of the maximal eigenvalue statistic to determine the number of

<sup>70</sup> See for example Fedderke and Romm (2004) for the same assumption.

<sup>71</sup> Enders (2004) argues that the maximal eigenvalue statistic is more appropriate in small sample sizes.

cointegrating vectors. The maximal eigenvalue statistic predicts the existence of one cointegrating vector for each of the two models.

**Table 4.5: Maximal Eigenvalue and Trace Statistics for Cointegration for the Portfolio Investment model**

Unrestricted intercepts and no trends, Order of the VAR = 2				
Null	Alternative	Max Eigen Value	90% Critical Value	95% Critical Value
$r = 0$	$r = 1$	54.3457*	39.8300	36.8400
$r \leq 1$	$r = 2$	28.81	34.6400	31.0200
$r \leq 2$	$r = 3$	27.6918	27.4200	24.9900
Null	Alternative	Trace Value	90% Critical Value	95% Critical Value
$r = 0$	$r = 1$	125.3001*	95.8700	91.4000
$r \leq 1$	$r = 2$	70.9545*	70.4900	66.2300
$r \leq 2$	$r = 3$	42.1375	48.8800	45.7000
$r \leq 3$	$r = 4$	14.4458	31.5400	28.7800

Note:\* denotes rejection of null at the 5% level of significance.

**Table 4.6: Maximal Eigenvalue and trace statistics for Cointegration for the FDI-Share model**

Unrestricted intercepts and no trends, Order of the VAR = 2				
Null	Alternative	Max Eigen Value	90% Critical Value	95% Critical Value
$r = 0$	$r = 1$	62.5087*	45.6300	42.7000
$r \leq 1$	$r = 2$	35.6570	39.8300	36.8400
$r \leq 2$	$r = 3$	25.8582	33.6400	31.0200
Null	Alternative	Trace Value	90% Critical Value	95% Critical Value
$r = 0$	$r = 1$	181.2465*	124.6200	119.6800
$r \leq 1$	$r = 2$	118.7378*	95.8700	91.4000
$r \leq 2$	$r = 3$	63.0808	70.4900	65.2300

Note:\* denotes rejection of null at the 5% level of significance.

The next sub-section presents the short-run and long-run parameter estimates for all three models based on the number of cointegrating vectors chosen.

### **4.6.3 Long-run and Short-run Parameter Estimates and Interpretations**

#### **4.6.3.1. Long-run and Short-run Parameter Estimates for the FDI Model**

The empirical investigations of this sub-section answer the question of how property rights, domestic risk and neighborhood effects affect the absolute levels of FDI stocks in South Africa for the period 1964 to 2005. A set of other explanatory variables identified in the literature as important determinants of FDI are controlled for.

Table 4.7 reports the long-run and short-run parameter estimates for the FDI model. Column A shows the just-identified model with the two cointegrating vectors normalised on LFDI and LRGDP. The asymptotic t-statistics indicate that all the variables in the LFDI equation, except LAVWAGE and LPROPERT, are significant at the 5% significance level. All the variables in the LRGDP equation are significant at the 5% significance level.

Over-identification proceeds by imposing a zero restriction on LAVWAGE in the LFDI vector. The likelihood ratio test for over-identification with a  $\chi^2=2.429$  and a p-value = 0.119 accepts the zero restriction on LAVWAGE. Once an exclusion restriction is placed on LAVWAGE in the LFDI vector, the variable LPROPERT becomes significant. We accept model B as the baseline model since all the variables are significant at the 5% and 10% significance levels and have plausible signs.

**Table 4.7: Long-run and Short-run Parameter Estimates for the FDI equation**

	(A)		(B)		(C)	
Long-run Parameter Estimates						
Dependant Variable	LFDI	LRGDP	LFDI	LGDP	LFDI	LGDP
LFDI	-1	0.056* (2.11)	-1	0.058* (2.10)	-1	-0.063* (3.10)
LRGDP	3.353** (1.95)	-1	1.570* (3.61)	-1	2.366* (4.05)	-1
RISK	-3.019* (2.45)	0.000	-2.307* (3.502)	0.000	-1.618* (5.17)	0.000
LPROPERT	1.574 (1.46)	0.731* (18.01)	1.644** (1.97)	0.731* (17.90)	0.191 (0.51)	0.659* (18.27)
OPEN	5.931* (2.05)	0.340* (2.76)	3.7912* (2.69)	0.337* (2.78)	4.609* (4.12)	0.179* (1.72)
LAVWAGE	-4.039 (1.09)	0.696* (5.06)	0.000	0.679* (4.82)	3.281* (2.32)	0.449* (3.85)
LRATIO	0.000	0.874* (13.09)	0.000	0.8788* (13.37)	0.000	0.8465* (18.65)
LPROPERTZ	----	----	----	----	-1.062* (2.76)	-0.114* (2.61)
LR Test of restrictions	----		$\chi^2(1)= 2.429[0.119]$ Accepts restriction		----	
Short-run Parameter Estimates						
$ECT1_{t-1}$	-0.061* (2.57)	-0.006* (2.82)	-0.105** (1.84)	-0.009** (1.97)	-0.108* (2.46)	-0.017* (3.12)
$ECT2_{t-1}$	-1.159 (1.04)	-0.082 (1.17)	-0.934 (0.82)	0.073 (0.70)	-1.566 (1.11)	0.003 (0.75)
Dummy Variables	GOLD DFDI		GOLD DFDI		GOLD DFDI	
SAMPLE	1962-2005		1962-2005		1962-2005	

Notes: 1) Figures in round and square brackets are absolute t-statistics and p-values respectively. 2) \* and \*\* denotes significance at 5% and 10% respectively.

The two equilibrium relationships in the baseline model in column B are as follows:

$$LFDI = 1.57LRGDP_t - 2.31RISK_t - 1.64LPROPERT_t + 3.79 OPEN_t \quad (42)$$

(3.61)      (3.50)      (1.97)      (2.69)

$$LRGDP = 0.06LFDI + 0.73LPROPERT_t + 0.34OPEN_t + 0.68LAVWAGE_t + 0.89LRATIO_t \quad (43)$$

(2.10)      (17.90)      (2.78)      (4.82)      (13.37)

The error correction terms in column B of table 4.7 represent the short run dynamics for each equilibrium relationship. The error correction term  $ECT1_{t-1}$  for the LFDI vector in equation 42 is -0.105. Equation 43, the LGDP vector has an error correction term  $ECT2_{t-1}$  of -0.934.

The main equation of interest is equation 42, which explains the determination of FDI. The two key variables are RISK and LPROPERT. As per our expectations, RISK has a negative statistically significant elasticity of -3.01. This implies that an increase in the domestic risk in South Africa leads to a decrease in FDI stocks. LPROPERT has a positive statistically significant elasticity of 1.64 showing that as South Africa ratings of the status of formal property rights improves, the country will receive more FDI. The results confirm that foreign direct investors do take the institutional environment and risk in the host country into account when making a decision about where to locate their investment.

These findings confirm those of Fedderke and Romm (2006) who obtained a positive relationship between FDI and property rights for South Africa for the period 1956 to 2003. Faria and Mauro (2004) also found that institutional quality measured by the average of the Kaufmann *et al* (2003) governance indicators has a positive and significant effect on FDI for a number of emerging economies including, South Africa.

In the GDP equation shown in equation 43, it is evident that LFDI, LPROPERT, OPEN, LAVWAGE and LRATIO all have a positive and significant effect on GDP. The positive statistically significant effect of FDI on GDP confirms the existence of feedback effects from

FDI to GDP. This supports the argument by Borensztein *et al* (1998) that FDI has some productivity-enhancing effects in the host country.

In column C of table 4.7, we include the *de jure* property rights index for Zimbabwe, LPROPERTZ, as an explanatory variable for FDI stocks in South Africa. This is done in order to test if there are any neighborhood effects on South Africa originating from Zimbabwe. *A priori*, we expected that secure property rights in Zimbabwe would have a positive spill-over effect on FDI in South Africa either through the economic channels that exist between the two countries or through investors herding behavior.

Estimation proceeds under the same just-identifying restrictions as in the base-line model. From the results in column C, it is evident that there is a negative and significant relationship between FDI stocks in South Africa and the property rights index for Zimbabwe. Since the property rights index for Zimbabwe assigns higher values for more secure property rights, the negative sign implies that worsening (improving) property rights in Zimbabwe will increase (decrease) the stocks of FDI in South Africa. Although this result contradicts our *a priori* expectations, there is a plausible explanation.

A probable explanation for this finding is that Zimbabwe and South Africa compete for foreign investment and present two alternative investment destinations to foreign investors who are interested in investing in Southern Africa. As property rights in Zimbabwe worsen, investors may decide to relocate to a safer investment destination in South Africa. The plausibility of this explanation is confirmed by the finding that, after controlling for the quality of formal property rights in Zimbabwe, LPROPERT which represents the quality of formal property rights in South Africa becomes insignificant while LAVWAGE representing labour costs in South Africa becomes significant. As investors relocate from an insecure environment in Zimbabwe, they become less concerned with the quality of property rights in



South Africa which appears to be safer but much more concerned with the labour costs of operating in South Africa.

In the GDP vector, all the variables maintain their signs as in the baseline model. LPROPERTZ has a negative effect on LRGDP. This implies that as property rights worsen in Zimbabwe, the level of GDP in South Africa increases. This could be due to the effect that the neighbor's property rights has on FDI in South Africa.

The conclusion of this sub-section is that domestic risk negatively affects FDI and property rights have a positive impact on FDI. Contrary to our expectation, weak property rights in Zimbabwe will lead to an increase in the absolute levels of FDI in South Africa. Another important finding is the existence of feedback effects from FDI to GDP. This confirms that FDI has some productivity enhancing effects in the host country.

#### **4.6.3.2. Long-run and Short-run Parameter Estimates for the Portfolio Investment Model**

In this sub-section, we examine the impact of property rights, domestic risk and neighborhood effects on portfolio investment stocks. The results are presented in Table 4.8. Earlier, the cointegration tests revealed the existence of one cointegrating vector. The normalisation restriction is placed on the log of portfolio investment stocks, denoted by LPI.

The just-identified model is shown in column A of table 4.8. It is evident that all the variables except RISK are significant at the 5% and 10% levels of significance. A zero restriction on the variable RISK is rejected the by likelihood ratio test for over-identification as shown in column B.

**Table 4.8: Long-run and Short-run Parameter Estimates for the Portfolio Investment Model**

	A	B	C
<b>Long -run Parameter Estimates</b>			
Dependant Variable	LPI	LPI	LPI
LPI	-1	-1	-1
LRGDP	4.665* (5.99)	4.739* (7.31)	7.359* (4.08)
RISK	-2.125 (1.51)	0.000	-1.645 (1.12)
LPROPERT	1.407* (2.54)	3.459 (0.73)	0.018 (0.01)
RTBR	0.125** (1.86)	0.100* (3.14)	0.217* (2.74)
LCREDIT	3.565* (2.94)	3.360 (3.50)	7.49* (2.26)
LPROPERTZ	----	----	2.953 (1.59)
<b>LR Test of restrictions</b>	----	$\chi^2(1)= 5.32[0.02]$ Rejects restriction	----
<b>Short-run Parameter Estimates</b>			
$ECT1_{t-1}$	-0.159* (2.54)	-0.253* (2.95)	-0.085* (2.33)
Dummy Variables	GOLD DPI	GOLD DPI	GOLD DPI
SAMPLE	1962-2006	1962-2006	1962-2006

Notes: 1) Figures in brackets are absolute values of the asymptotic t-statistics. 2) \* and \*\* denotes significance at 5% and 10% respectively.

We accept the model in column A as our baseline model. The equilibrium relationship in the baseline model in column A is as follows:

$$LPI = 4.67LRGDP - 2.13RISK_t + 1.41LPROPERT_t + 0.13TRBR_t + 3.565LCREDIT \quad (44)$$

(2.99)      (1.51)      (2.54)      (1.86)      (2.94)

The error correction term  $ECT1_{t-1}$  is -0.159 and represents the short run dynamics for the equilibrium relationship in equation 44. Since the error correction term is statistically significant and lies between zero and minus two, the estimated relationship is dynamically stable.

Again, the two key explanatory variables are RISK and LPROPERT. Although RISK has a marginal statistical significance, it has a negative effect on portfolio investment stocks. LPROPERT has a positive and statistically significant effect on portfolio investment stocks. These results confirm the theoretical findings in the portfolio diversification literature and the NIE literature, which predict that domestic risk and institutional inefficiencies reduce foreign capital inflows by increasing uncertainty and transaction costs.

The other control variables, GDP denoted by LRGDP, the real Treasury Bill rate denoted by RTBR and the financial sector development denoted by CREDIT all have a positive statistically significant effect on portfolio investment stocks in line with our *a priori* expectations. Unlike the case of FDI, we do not control for the labour costs and trade openness. These variables are generally not viewed as theoretically relevant for the determination of portfolio investment.

In columns C, we test for the possibility of neighborhood effects on South Africa from Zimbabwe. This is done by including the *de jure* property rights index for Zimbabwe, LPROPERTZ, as an explanatory variable of portfolio investment in South Africa. The just-identifying restrictions are the same as in the baseline model.

Although LPROPERTZ is marginally significant, it has a positive effect on the portfolio investment stocks in South Africa. This implies that as property rights scoring improve (worsen) in Zimbabwe, the portfolio investment stocks in South Africa increase (decrease). Poor property rights in Zimbabwe in this case have a negative spill-over effect on portfolio investment in South Africa. This contrasts our earlier finding for FDI where it was shown that poor property rights in Zimbabwe will lead to an increase the absolute level of FDI in South Africa.

The differences of the impact of neighborhood effects on FDI and portfolio investment could be explained by the different time horizons of FDI and portfolio investment. On the one hand, FDI tends to be long term in nature. Thus, when the property rights in Zimbabwe deteriorate, South Africa may receive more FDI as long-term direct investors relocate their investment from Zimbabwe to South Africa. This allows the long-term foreign investors to continue having access to resources and markets in the Southern African region. On the other hand, portfolio investment is generally short-term. As such, when property rights in Zimbabwe deteriorate, short-term foreign investors may disinvest or stop new investments in South Africa due to fear of contagion.

#### **4.6.3.3. Long-run and Short-run Parameter Estimates for the Relative FDI-Share Model**

Now we have established the impact of property rights, domestic risk and neighborhood effects on the absolute levels of FDI and portfolio investment stocks. This sub-section seeks to answer the question of how property rights, domestic risk and neighborhood effects impact on the composition of foreign capital stocks in South Africa.

When FDI is alienable, thus difficult to expropriate, the relative share of FDI in total foreign capital stocks varies positively with domestic risk and negatively with secure property rights. This is because inalienable FDI possesses some risk-sharing advantages so the when the host country's property rights and institutions are weak, foreign investors shift away from portfolio investment towards FDI which is considered to be safer than other forms of foreign investment. This in turn increases the relative share of FDI in total foreign capital stocks.

Table 4.9 reports the long-run and short-run parameter estimates for the FDI-share model. Cointegration tests showed the existence of one cointegrating vector. To just-identify the system, we normalise on the log of the share of FDI in total foreign investment stocks denoted LFDISHARE. The just-identified model is shown in column A.

According to the results in column A, LPROPERT is the only variable that is insignificant at the 5 and 10 percent levels of significance. However, an exclusion restriction on LPROPERT in column B is rejected by the likelihood ratio test. We therefore adopt the model in column A as the baseline model. The equilibrium relationship in the baseline model in column A is as follows:

$$\text{LFDISHARE} = 1.17\text{LRGDP}_t - 0.94\text{RISK}_t + 0.15\text{LPROPERT}_t + 2.19\text{OPEN}_t - 0.03\text{RTBR}_t + 0.15\text{CREDIT}_t$$

(4.99)            (4.87)            (1.71)            (3.04)            (3.45)            (1.71)

(45)

The error correction term  $\text{ECT1}_{t-1}$  is -0.130 and represents the short run dynamics for the equilibrium relationship in equation 45. Since the error correction term is statistically significant and lies between zero and minus two, the estimated relationship is dynamically stable.

Again the two key variables are RISK and LPROPERT. The results show that RISK has a negative and statistically significant effect on the relative share of FDI in total foreign capital stocks. This implies that, as domestic risk in South Africa increases, the relative share of FDI in total foreign capital stocks decreases. Although the property rights index is marginally significant, its positive sign suggests that, an improvement of property rights in South Africa will lead to an increase in the relative share of FDI in total foreign capital stocks.

**Table 4.9: Long Run and Short Run Parameter Estimates for the LFDISHARE equation**

	A	B	C
<b>Long Run Parameter Estimates</b>			
Dependant Variable	LFDISHARE	LFDISHARE	LFDISHARE
LFDISHARE	-1	-1	-1
LRGDP	1.166* (4.99)	0.915* (6.09)	0.727* (6.17)
RISK	-0.941* (4.87)	-0.677* (7.02)	-0.776* (12.22)
LPROPERT	0.519 (1.71)	0.000	0.103 (0.96)
OPEN	2.194* (3.04)	1.673* (2.99)	1.083 (0.26)
RTBR	-0.027* (2.59)	-0.019* (2.40)	-0.011* (2.67)
LCREDIT	3.367* (6.03)	3.305* (6.69)	1.839* (4.45)
LPROPERTZ	----	----	-0.348 (2.75)
<b>LR Test of restrictions</b>	----	$\chi^2(1)= 4.42[0.035]$ <b>Rejects restriction</b>	----
<b>Short Run Parameter Estimates</b>			
dRISK	0.136 (1.18)	0.153 (1.38)	0.142 (1.04)
dLPROPERT	0.025 (0.09)	0.072 (0.30)	0.009 (0.04)
$ECT1_{t-1}$	-0.130* (2.14)	-1.969 (1.46)	-0.215* (2.97)
Dummy Variables	DFDI DPI GOLD	DFDI DPI GOLD	DFDI DPI GOLD
SAMPLE	1962-2005	1962-2005	1962-2005

Notes1) Figures in round and square brackets are absolute t-statistics and p-values respectively. 2) \* and \*\* denotes significance at 5% and 10% respectively.

The findings suggest that domestic risk and institutional inefficiency reduce the relative share of FDI in total foreign capital stocks. This contradicts the  $\theta$ -hypothesis suggested by Albuquerque (2003) and backed by Razin *et al* (1998) which postulates that poor institutional quality and domestic risk increase the relative share of FDI in total foreign capital stocks due to the risk-sharing advantage of FDI.

Instead, the results are in line with an alternative hypothesis suggested by Faria and Mauro (2004) who argued that FDI in the capital-intensive and natural resource sectors is not inalienable thus fully appropriable. As such, when domestic risk and institutional inefficiency increase, the relative share of FDI in total foreign capital stocks decreases.

A possible explanation for our empirical finding is that FDI in South Africa is concentrated in the natural resource and /or capital-intensive sectors where the host country can expropriate foreign investment easily.<sup>72</sup> When property rights and the institutional environment weaken under such circumstances, foreign investors tend to shift their investment away from FDI to other forms of foreign capital, thus reducing the relative share of FDI in total foreign capital stocks. In the short-run, RISK and LPROPERT are statistically insignificant as shown in the lower panel of table 4.9 in column A. This shows that the  $\theta$ -hypothesis is not satisfied in the short-run.

These results confirm those of Ahmed *et al* (2005) who found that the institutional quality measured by the ICRG index of law and order positively affects the relative share of FDI in total foreign capital inflows for a group of 81 developing countries, including South Africa. Ahmed *et al* (2005) suggested that their findings could be explained by the concentration of FDI in the natural resources and human capital-intensive sectors where FDI is not inalienable.

Next, we discuss the interpretation of the other control variables. LRGDP, OPEN and LCREDIT have a positive and statistically significant effect on LFDISHARE. This shows that as national income, trade openness and financial sector development improve, the share of FDI in total foreign capital stocks goes up. The variable RTBR has a negative effect on LFDISHARE. This shows that short-term interest rates reduce the relative share of FDI in

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<sup>72</sup> Fedderke and Romm (2006) showed that FDI in South tended to be capital-intensive for the period 1953 to 2003.

total foreign capital stocks. These results are in line with the earlier findings of Lane and Milesi (2001a, 2001b), Albuquerque (2003) and Ahmed *et al* (2005).

In column C, we investigate the impact of neighbourhood effects on the relative share of FDI in total foreign capital stocks. Again, we include the *de jure* property rights index for Zimbabwe, LPROPERTZ as an explanatory variable of the relative share of FDI in total foreign capital stocks in South Africa. The results show that LPROPERTZ has a negative statistically significant effect on LFDISHARE. This implies that, as property right worsen (improve) in Zimbabwe, the share of FDI in total foreign capital stocks in South Africa increases (decreases). All the that other variables maintain their signs as in the baseline model.

The finding that poor property rights in Zimbabwe increase the relative share of FDI in total foreign capital stocks in South Africa can be explained by the impact of neighbourhood effects on the absolute levels of FDI and portfolio investment. It was established that deteriorating property rights in Zimbabwe increase the absolute levels of FDI but reduce the absolute levels of portfolio investment in South Africa. As such, deteriorating property rights in Zimbabwe will lead to an increase in the relative share of FDI in total foreign capital stocks.

## 4.7 Conclusion

The aim of the chapter was to investigate the impact of property rights, domestic risk and the neighbourhood effects on the absolute levels of FDI and portfolio investment as well as the composition of foreign capital stocks in South Africa for the period 1960 to 2005. Neighbourhood effects were proxied by the *de jure* property rights index for Zimbabwe. Zimbabwe shares a common border with South Africa and is one of South Africa's major



trading partners. Empirical estimations were carried out using the Johansen VECM technique. The chapter makes several key points.

The first point is that domestic risk which is a combination of default risk and currency risk negatively affects FDI and portfolio investment. These findings are in line with the portfolio diversification literature which postulates that domestic risk discourages both long-term and short-term foreign investment inflows.

The second point is that the institutional quality, proxied by an index of *de jure* property rights for South Africa, positively affects FDI and portfolio investment stocks. This finding is consistent with the theoretical proposition of the NIE that secure formal property rights reduce transaction costs and uncertainty, thereby increasing the attractiveness of a country as a destination for foreign investment.

The third point is concerned with the effect of domestic risk and property rights on the relative share of FDI in total foreign capital stocks. In contrast to the  $\theta$ -hypothesis, we found that domestic risk and institutional weaknesses reduce the relative share of FDI in total foreign capital stocks. A likely interpretation is that in the long-run, FDI in South Africa is not inalienable and a falling relative share of FDI in total foreign capital stocks is not an indication of increasing institutional efficiency.

This result could be explained by the concentration of FDI in the natural resources extraction and/or capital-intensive sectors where the host country government and/or political elite can easily expropriate foreign capital. When FDI is not less subject to expropriation (not inalienable), the host country government needs to ensure secure property rights and low domestic risk in order to attract relatively more FDI.

The findings suggest that if the South African government wants to change the current composition of foreign liabilities, which is biased towards portfolio investment, the

government should implement policies that ensure low domestic risk (both default and currency) and secure property rights. The same policy recommendation was made by Ahmed *et al* (2001) for a group of 81 countries, including South Africa. Again, secure property rights and low domestic risk will not only increase the relative share of FDI in total foreign capital stocks but it will also increase the absolute levels FDI and portfolio investment.

The fourth issue has to do with the neighbourhood effects, captured by including the *de jure* property rights index for Zimbabwe as an explanatory variable for foreign capital stocks in South Africa. In contrast to our expectation of negative spill-over effects, it was found that deteriorating property rights in Zimbabwe will lead to an increase in the absolute levels of FDI stocks as well as the relative share of FDI in total foreign investment stocks in South Africa.

A plausible explanation for this finding is that Zimbabwe and South Africa present alternative destinations to foreign investors interested in investing in the Southern African region. Therefore, deteriorating property rights in Zimbabwe may induce foreign direct investors to relocate their investment from Zimbabwe to South Africa. However, in the case of the short-term portfolio investment, our *a priori* expectation of negative spill-over effects is supported by the empirical results. It was shown that there is a positive relationship between the *de jure* property rights index for Zimbabwe and portfolio investment stocks for South Africa. This implies that deteriorating property rights in Zimbabwe will lead to a decrease in the portfolio investment stocks in South Africa.

Lastly, the thesis also showed that there are factors other than domestic risk and property rights that the government should address in order to increase foreign investment in South Africa. These include increasing trade openness, reducing labour markets distortions and promoting financial sector development.

## Chapter 5

### Conclusions and Policy Recommendations

The study is an in-depth investigation of how institutions affect the absolute levels and composition of foreign capital stocks in South Africa and Zimbabwe. This contributes to a broad research agenda on the role of institutions in determining economic outcomes. From a theoretical point of view, it is agreed that institutional factors such as property rights and the rule of law are important determinants of the long-term economic performance. Empirical work is, however, inconclusive.

Empirical investigations in this area face some challenges regarding the measurement of institutions. Although the political science and political economy fields have produced several institutional indices, there is no universally agreed way of measuring institutions. Again, most of the existing institutional indices have a short time coverage thus reducing their usefulness in country-specific time-series studies. This explains why empirical studies in this body of research are largely based on cross-sectional and panel data thereby, limiting any path-dependency exploration on the link between institutions and economic outcomes.

The thesis contributes to the challenge of measuring institutions in empirical work by constructing three institutional indices for Zimbabwe for the period 1946 to 2005. These consist of two *de jure* indices of property rights and political freedom and one *de facto* political instability index. In doing so, the study adopted the North (1990) theoretical framework which views institutions as the rules of the game governing human interaction in the economic and political arenas. The Fedderke *et al* (2001) Delphi technique was adopted in the construction of the *de jure* political freedom and property rights indices. Some methodological improvements were achieved by scoring sub-components of the indices individually. This has the advantage of reducing aggregation biases as well as enabling the

analysis of individual sub-components of the indices. The *de facto* political instability index was constructed by combining several outcome-based measures of political instability into a composite index using a weighting system.

The new dataset has a long time coverage, which enables country-specific empirical investigations on the link between institutional factors and economic outcomes. It was established that the new indices correlate well with some of the most commonly used institutional indices, thus raising our confidence on the efficacy of the new dataset. The new political freedom index has a high correlation with the Freedom House political freedom index and the Vanhanen democratization index. The new property rights index has a strong correlation with the Fraser Institute and Heritage Foundation indices of property rights.

It was demonstrated that the new political freedom index and the new property rights index have a very low correlation. The low correlation suggests that political rights and property rights are highly divisible. Furthermore, the study found that political instability correlates strongly with property rights but, surprisingly has a weak correlation with political freedom. While Zimbabwe and South Africa had close historical ties, the study also showed that over time, the formal institutional frameworks in the two countries took different trajectories.

The thesis then examined the impact of property rights on FDI in Zimbabwe for the period 1964 to 2005. The extensive study of the theoretical literature provided some insights into the channels through which institutional factors such as property rights affect FDI. The Johansen VECM technique was then used to estimate long-run parameters as well as adjustment parameters for the Zimbabwean FDI function.

The results indicated that property rights are consistently an important explanatory variable, even after controlling for periods of no significant new foreign capital inflows as well as after using an alternative proxy for property rights. Other significant variables that explained FDI

in Zimbabwe include real GDP, capital intensity, the external debt to GDP ratio, political instability as well as the educational levels. These findings are consistent with other international studies on FDI.

In the case of South Africa, the empirical investigations were extended to examine the impact of property rights, domestic risk and neighbourhood effects on the absolute levels as well as the composition of foreign capital stocks over the period 1960 to 2005. The empirical investigations were also carried out using the Johansen VECM technique.

The South African-American sovereign bond yield spread was used to measure domestic risk. This sovereign spread incorporates both the default and the currency risks, since the bonds are denominated in different currencies. Neighbourhood effects were captured by including the *de jure* property rights index for Zimbabwe as an explanatory variable of the absolute levels and composition of foreign capital stocks in South Africa.

Theory concurs that strong institutions positively affect both FDI and portfolio investment and that domestic risk (both default and currency) impacts negatively on FDI and portfolio investment. In line with these *a priori* theoretical expectations, our empirical results showed that in the long-run, domestic risk negatively affects FDI and portfolio investment. Also consistent with the theory is the empirical finding that property rights, proxied by the *de jure* property rights index for South Africa, significantly affects both FDI and portfolio investment positively.

There is, however, no theoretical consensus on the impact of institutions and domestic risk on the composition of foreign capital inflows and stocks in the host country. The  $\theta$ -hypothesis, based on the corporate finance literature, postulates that the relative share of FDI in total foreign capital flows and stocks tends to be high in countries that have weak institutions, high domestic risk and financial constraints. In contrast, an alternative proposition by Faria and

Mauro (2004) suggests that high domestic risk and weak institutions tend to reduce the relative share of FDI in total foreign capital inflows and stocks. This occurs when FDI is concentrated in the natural resource-intensive and/or capital-intensive sectors where FDI is fully appropriable.

The empirical results established that the relative share of FDI in total foreign capital stocks is positively related to property rights and negatively related to domestic risk. These results support the proposition by Faria and Mauro that low domestic risk and strong institutions tend to increase the relative share of FDI in total foreign capital inflows and stocks when FDI is not inalienable. The results fail to support the  $\theta$ -hypothesis and are consistent with earlier empirical findings of Ahmed *et al* (2005). A plausible explanation for this finding is that FDI in South Africa tends to be concentrated in the natural resource-intensive and capital-intensive sectors where FDI is fully appropriable.

In respect of the neighbourhood effects, the *a priori* expectation of negative spill-over effects was confirmed in the case of portfolio investment. It was established that deteriorating property rights in Zimbabwe lead to a reduction in the absolute levels of portfolio investment stocks in South Africa. However, in the case of FDI, the results indicated that deteriorating property rights in Zimbabwe will lead to an increase both the absolute levels of FDI stocks and the relative share of FDI in the total foreign capital stocks in South Africa.

Another important finding of the thesis is the existence of feedback effects from FDI to GDP for both South Africa and Zimbabwe. This finding confirms the theoretical proposition by Boreznstein *et al* (1998) that FDI has some productivity-enhancing effects in the host country.

On the basis of the above empirical findings, recommendations for policy in South Africa and Zimbabwe can be made. In respect of Zimbabwe, the main policy recommendations are:

- The government should promote an institutional framework that ensures secure property rights not just for a minority but for the broad cross-section of the society. This will reduce political instability and also increase FDI.
- Government policy should also target investment in human capital not only because it attracts FDI but also because it enhances the FDI-absorptive capacity of the host country and the possibility of FDI spill-over effects on the domestic economy.

In respect of South Africa, the main policy recommendations are:

- In order to change South Africa's current composition of foreign liabilities which is biased towards portfolio investment, the South African government should implement policies that ensure low domestic risk (both default and currency) and secure property rights. This will not only increase the relative share of FDI in total foreign capital stocks but it will also increase the absolute levels FDI and portfolio investment.
- The government should also focus on reducing labour market distortions, promoting financial sector development and trade openness so as to attract more foreign capital.

In respect of both countries, the main policy recommendations are:

- Foreign capital especially FDI enhances domestic output and policy should therefore play an active role in maintaining institutional, political and macroeconomic stability so as to attract foreign capital inflows, especially FDI.
- The Southern African governments should ensure secure property rights in the entire region in order to increase the levels of foreign capital inflows to the region. This is because sound domestic institutions need to be complemented by sound regional institutions, especially in the presence of neighbourhood effects.

## Appendix 1: Time line of Legislation for Zimbabwe, 1946-2005<sup>73</sup>

### Appendix 1A: Time Line of Legislation for the *de jure* Political Freedom Index

#### Time Line of Legislation for the *de jure* Political Freedom Index

Year	Act Title and its Provisions
Up to 1946	<p><b><u>Master and Servant Act No xx, 1901</u></b>  <b><u>Immorality and Indecency Suppression Act No xx, 1914</u></b></p> <p><b><u>Constitution of 1923</u></b></p> <ul style="list-style-type: none"> <li>• Gives internal self government to white population in Southern Rhodesia.</li> <li>• Creation of a legislative assembly elected by a non-racial franchise effectively limited to Europeans because of the high property and income requirements.</li> </ul> <p><b><u>Land Apportionment Act No xx, 1930</u></b></p> <ul style="list-style-type: none"> <li>• Divides Southern Rhodesia into a European Area, an African Area, an Unreserved Area and National land.</li> <li>• Effectively prevents Africans from leasing, acquiring or occupying property in European areas and Europeans from doing the same in African Areas.</li> </ul> <p><b><u>Industrial Conciliation Act, 1934</u></b></p> <p><b><u>Sedation Act No xx, 1936</u></b></p> <ul style="list-style-type: none"> <li>• Limits freedom of speech.</li> </ul> <p><b><u>Electoral No xx, 1937</u></b></p> <ul style="list-style-type: none"> <li>• Allowed non-British subjects who had been on active war time service with the His Majesty's Forces to enrol provided they met other qualifications.</li> <li>• Disqualified persons who had drawn Government rations or allowances for a period of one year from voting.</li> <li>• Further African enrolment was decreased by the provision that the property occupation qualification could no longer be satisfied by buildings to that value so long as they stood in on communally-held land.</li> </ul> <p><b><u>Native Law and Courts Act No 33, 1937</u></b></p> <ul style="list-style-type: none"> <li>• Strengthened the position of African customary law by substituting common law with native law and customs in cases between Africans.</li> </ul> <p><b><u>Settlement of Colonial Natives in Natives Kraals Prohibition Act No xx, 1939</u></b></p> <ul style="list-style-type: none"> <li>• Made it a criminal offence for "Cape boys" and non-indigenous Africans to be found in an African Kraal unless such African had written permit from the Native Commissioner or his master.</li> </ul> <p><b><u>Native ( Urban Areas) Accommodation and Registration Act No 6, 1946</u></b></p> <ul style="list-style-type: none"> <li>• Requires employers and local government authorities to provide minimum housing for African workers and families.</li> <li>• Empowers the local government authorities to remove unemployed blacks from towns.</li> <li>• Puts the total control of local government in the white's hands.</li> </ul>
1947	<p><b><u>Native Labour Board Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• Empowers non-representative bodies to settle wages for Africans.</li> </ul> <p><b><u>Constitution Amendment Act No 26</u></b></p>

73 The sources of legislation are Palley (1966), Saller (2004), ZLHR (1999-2004), Freedom House (2001-2005), U.S. Department of States Bureau for Democracy, Human Rights and Labor (2003-2005), International Labor Organization Natlex (1980-2005).



	<ul style="list-style-type: none"> <li>Clarifies the definition of such persons falling under the category of natives.</li> </ul>
1948	
1949	
1950	<p><b><u>Subversive Activities Act No 30</u></b></p> <ul style="list-style-type: none"> <li>Limits freedom of expression.</li> </ul>
1951	<p><b><u>Constitutional Amendment Act No 6</u></b></p> <ul style="list-style-type: none"> <li>Laid down that English Language was to be the only official language of the colony; aimed at Afrikaans and African Languages such as Sindebele or Shona.</li> <li>Provisions to secure a minimum rural representation in the legislature.</li> </ul> <p><b><u>Electoral Act No 27</u></b></p> <ul style="list-style-type: none"> <li>Raised the voter's qualifications: increased the voters qualifying parameters as follows, the income from £100 to £240 and the value of property occupied from £150 to £500.</li> <li>Southern Rhodesian Citizenship was made a further requirement for voter qualification.</li> <li>Applicants for the vote were now required to be able to speak and write English language quite apart from the necessity of filling the enrolment form.</li> </ul> <p><b><u>Governors Power's Act No 13</u></b></p> <ul style="list-style-type: none"> <li>Facilitated the transaction of routine business by providing that matters might be decided by a committee of Executive Council and be put before the Governor by the Prime Minister without necessity of a full meeting.</li> </ul> <p><b><u>Native Land Husbandry Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Introduces stringent conservation measures to force Africans to de-stock and modify land tenure practices.</li> <li>Introduced forced labour for Africans under the age of 51 who have been unemployed for the period of one month or longer (African farmers on the Tribal trust Lands are for this purpose defined unemployed).</li> <li>Failure to comply with such a measure is a criminal offence</li> <li>Africans who are so engaged become liable to the African Labour Regulations Act and the Master and Servants Act of 1901 both of which provide criminal penalties for deserters and for failure to obey any employers' commands.</li> </ul> <p><b><u>Native ( Urban Areas) Accommodation and Registration Act No 20</u></b></p> <ul style="list-style-type: none"> <li>Sets the exceptional cases allowing African occupation of European land which include educational, religious, etc.</li> <li>Confers rights of entry onto private property with racial discrimination.</li> <li>Excludes the necessity for search warrants in African townships.</li> <li>Regulations requiring Africans to be in possession of a pass.</li> </ul>
1952	
1953	<p><b><u>The Municipal Act No 34</u></b></p> <ul style="list-style-type: none"> <li>Allows municipalities to regulate African eating houses and to prohibit non-Africans from being present in such eating houses. <ul style="list-style-type: none"> <li>Regulate pedestrian traffic in public streets including the use thereof by Africans.</li> </ul> </li> <li>Provisions which allow Municipalities to appoint separate omnibuses or portions of omnibuses for use by white persons.</li> <li>Provisions which allow municipalities to control and supervise the housing of African servants and prevent annoyance arising there from to other persons.</li> </ul>
1954	<p><b><u>Federal Immigration Act No 37</u></b></p> <ul style="list-style-type: none"> <li>Lays down the deportation procedures and states that citizens may not be declared prohibited unless a deportation order has been made against them.</li> </ul> <p><b><u>Deportation Act No 36</u></b></p> <ul style="list-style-type: none"> <li>Provides that persons born in Southern Rhodesia or those who have been resident in the country for more than seven years may not be deported.</li> </ul> <p><b><u>Inter –territorial Movement of Persons Control Act</u></b></p>

1955	<p><b><u>Public Order Act No 31</u></b></p> <ul style="list-style-type: none"> <li>• Gives powers to detain and restrict without trial</li> <li>• Provisions which limit freedom of speech.</li> </ul> <p><b><u>Defence Act No 23</u></b></p> <ul style="list-style-type: none"> <li>• Provided for compulsory military training in the territorial forces for Europeans, Asians and coloured male but not for Africans.</li> <li>• Discriminatory regulations making quite different provisions for remuneration, accommodation and allowances of African and European troops.</li> </ul>
1956	<p><b><u>Federal Education Act</u></b></p> <ul style="list-style-type: none"> <li>• Permitted separate schools Europeans on one hand and Asians and coloureds on the other.</li> <li>• Governs non-African education only.</li> </ul>
1957	<p><b><u>Native ( Registration and Identification) Act No 144</u></b></p> <ul style="list-style-type: none"> <li>• Imposes criminal penalties for deserters.</li> <li>• Makes provisions for the registration of Africans, for the issue to them of certificates of registration, registration books or identification cards and for the imposition of criminal liability on any African who is found without a certificate, book, identity card or permit.</li> </ul> <p><b><u>Native Councils Act No 19</u></b></p>
1958	<p><b><u>Foreign Migratory Labour Act No 30</u></b></p> <ul style="list-style-type: none"> <li>• Limits the movement of non-Southern Rhodesia Africans seeking employment in Rhodesia.</li> </ul> <p><b><u>Native Affairs Amendment Act No 16</u></b></p> <ul style="list-style-type: none"> <li>• Provides for the setting up of the Native Court of Appeal for African civil cases properly constituted under a president who was required to have considerable legal experience.</li> </ul>
1959	<p><b><u>Apprenticeship Act No 50</u></b></p> <ul style="list-style-type: none"> <li>• Opened the Apprenticeship system to Africans.</li> </ul> <p><b><u>Citizens of Rhodesia and Nvasaland and British Nationality Amendment Act 16</u></b></p> <p>-</p> <p><b><u>Federal Public Service Act 19</u></b></p> <ul style="list-style-type: none"> <li>• Provides security of tenure to Civil Servants in Branch I (entirely European) and Branch II (Africans with academic and technical qualifications but not in Branches III and IV.</li> <li>• Provides for the promotion of non- Europeans to Branch 1.</li> </ul> <p><b><u>Industrial Conciliation Act 29</u></b></p> <ul style="list-style-type: none"> <li>• Stipulates that the constitution of trade unions or employers organisations may permit membership to be divided into branches on the basis of race or colour.</li> <li>• Constitution should ensure protection of skilled workers voting and other rights.</li> <li>• Precludes Unregistered Unions from striking unless an industrial board, or council has considered and reported matter.</li> </ul> <p><b><u>Native Affairs Amendment Act No 31</u></b></p> <ul style="list-style-type: none"> <li>• Placed considerable limitations on individual freedoms for Africans.</li> </ul> <p><b><u>Native Education Act No 8</u></b></p> <ul style="list-style-type: none"> <li>• Regulates African education and not non- African education.</li> <li>• Regulations providing for exclusion of African children from government schools if their fees are not paid.</li> <li>• Regulations providing for discriminatory treatment of teachers in African Schools.</li> </ul> <p><b><u>Preventive Detention ( Temporary Provisions) Act 39</u></b></p> <ul style="list-style-type: none"> <li>• Provided for a detention without trial.</li> <li>• Stipulated that the act would expire at the end of five years.</li> </ul> <p><b><u>Public Order Amendment Act No 41</u></b></p> <ul style="list-style-type: none"> <li>• Provides for indemnity in respect of any act or thing whatsoever in good faith advised, commanded, ordered or directed in connection with the state of emergency in Southern Rhodesia.</li> </ul>

	<p><b><u>State Lottery Amendment Act No 30</u></b></p> <ul style="list-style-type: none"> <li>Repealed the provision of the 1939 State Lottery Act which excluded Africans from the State Lottery in order to prevent them from dangers of excessive gambling.</li> </ul> <p><b><u>Unlawful Organisations Act No 38</u></b></p> <ul style="list-style-type: none"> <li>Gave the executive power to declare certain organisations unlawful.</li> <li>Limits freedom of speech.</li> </ul> <p><b><u>Emergency (Temporary Detention ) Regulations S.R.G.N. 122/59</u></b></p> <ul style="list-style-type: none"> <li>Government utilised emergency powers to make the above regulation during a state emergency providing for detention without trial.</li> </ul>
1960	<p><b><u>Citizens of Rhodesia and Nyasaland and British Nationality Amendment Act No 16</u></b></p> <p><b><u>Emergency Powers Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Allowed the Rhodesian Security Forces to carry out violent reprisals against guerrillas and civilians with little fear of legal punishment.</li> <li>Repeals the Public Order Act of 1955.</li> </ul> <p><b><u>Land Apportionment Amendment Act No 54</u></b></p> <ul style="list-style-type: none"> <li>Modifying laws relating to the native urban areas with the effect of lessening discrimination.</li> <li>Repeals certain pass laws.</li> </ul> <p><b><u>Law and Order ( Maintenance) Act No 53</u></b></p> <ul style="list-style-type: none"> <li>Provisions which permit the Governor to prohibit publications which he feels are likely to be contrary to the interests of public safety or security.</li> <li>Sections 50 and 51 allow the Minister of Law and Order to restrict persons to particular areas of Southern Rhodesia for periods up to 5 years.</li> <li>Denies bail applications if the Attorney-General certifies that it is likely that public security would be prejudiced.</li> <li>Shifts the burden of proof in respect of certain facts on to the accused.</li> <li>Provisions which make it an offence to expose the police of any public officers to contempt, ridicule or disesteem.</li> <li>Makes provisions for the imposition of a curfew by regulating authorities if any public order is apprehended or occurs.</li> <li>Makes provision to exclude the necessity for search warrants in African Townships.</li> <li>Penalizes any person who takes part in a procession for which permit has not been obtained.</li> </ul> <p><b><u>Public Service Amendment Act No 42</u></b></p> <ul style="list-style-type: none"> <li>Deleted the prohibition on entry to the public service of “any native or coloured person” inserted in 1931.</li> </ul> <p><b><u>Vagrancy Act No 40</u></b></p> <ul style="list-style-type: none"> <li>Allowed vagrants( those unable to show they have employment or visible and sufficient means of subsistence) to be arrested without warrant</li> <li>Made it an offence for any person to permit a vagrant to reside on his premises.</li> <li>Makes provisions for vagrants to perform labour which is considered to form part of the rehabilitation process.</li> </ul> <p><b><u>Pass Laws (Repeal) Act No 50</u></b></p> <ul style="list-style-type: none"> <li>Repealed the Pass Laws Act which required Africans to carry passes.</li> </ul>
1961	<p><b><u>Constitution of 1961</u></b></p> <ul style="list-style-type: none"> <li>The constitution contains a bill of rights.</li> <li>Creates a separate voters roll giving Africans their first seats in the assembly.</li> </ul>

	<ul style="list-style-type: none"> <li>Contains complex provisions for the attainment of majority rule in the remote future.</li> <li>Relinquished Britain's reserved powers over local legislation and created a Constitutional assembly meant to safeguard African rights.</li> </ul> <p><b><u>Official Secrets Acts (OSA)</u></b></p> <ul style="list-style-type: none"> <li>Nullifies the right of citizens to access certain government information termed classified information.</li> <li>Makes it a crime to divulge "any information acquired in the course of official duties."</li> </ul> <p><b><u>Local Government Act No 4</u></b></p> <ul style="list-style-type: none"> <li>Provides for Local Boards in African Townships.</li> <li>Authorizes the issue of by-laws for the control of Africans' activities in African townships.</li> </ul> <p><b><u>Liquor Amendment Act No 15</u></b></p> <ul style="list-style-type: none"> <li>Permitted all races to buy liquor.</li> </ul> <p><b><u>Immorality and Indecency Suppression Repeal Act No 42</u></b></p> <ul style="list-style-type: none"> <li>Repeals an Act which had imposed heavy penalties on Africans who cohabited with European men and lesser penalties on such women, no penalties being inflicted on European men and African women who cohabited.</li> </ul> <p><b><u>Repeal of Laws Act No 35</u></b></p> <ul style="list-style-type: none"> <li>Repeals a number of discriminatory laws such as Settlement of Colonial Natives in Kaffir Kraals Prohibition Act of 1939 and the Native adultery Act.</li> </ul> <p><b><u>Electoral Amendment Act No 16</u></b> Provided for the keeping of two voter's roll "A" and "B" for each constituency and electoral district.</p> <p><b><u>Land Apportionment Amendment Act No. 37</u></b></p> <ul style="list-style-type: none"> <li>Creates a category of land open to all races.</li> </ul>
1962	<p><b><u>The Land Apportionment Amendment Act No 53</u></b></p> <ul style="list-style-type: none"> <li>Provisions for the establishment and control of private schools in European areas which may admit pupils of all races.</li> </ul>
1963	<p><b><u>Law and Order (Maintenance) Amendment Act 12</u></b></p> <ul style="list-style-type: none"> <li>Prohibited public gatherings on Sundays except with the permission of the Minister of Law and Order or as described in a schedule to the Act.</li> </ul> <p><b><u>Southern Rhodesia and British Nationality Act No 63</u></b></p> <ul style="list-style-type: none"> <li>Provides for the standard methods of acquiring a Southern Rhodesia Nationality after the dissolution of the Federation.</li> <li>Discriminated against women in polygamous systems outside of Rhodesia and children of a marriage solemnized outside Southern Rhodesia under a system permitting polygamy.</li> </ul> <p><b><u>Rural Land Act No 67</u></b></p> <ul style="list-style-type: none"> <li>Establishes the rural land board which approves transfers of land rights in native purchase areas.</li> </ul> <p><b><u>Native Affairs Amendment Act No 22</u></b></p> <ul style="list-style-type: none"> <li>Criminal jurisdiction, except in respect of contempt of court was taken away from native commissioners (now termed the District Commissioners) and the criminal jurisdiction in inferior courts was made exclusive prerogative of magistrates courts.</li> </ul>
1964	<p><b><u>Miscellaneous Offences Act No 18</u></b></p> <ul style="list-style-type: none"> <li>Provides for the suppression and punishment of certain offences.</li> </ul> <p><b><u>Preventive Detention (Temporary Provisions) Amendment Act 1</u></b></p> <ul style="list-style-type: none"> <li>It purported to extend the validity of the principal Act enacted in 1959 by five more years.</li> </ul> <p><b><u>Emergency (Highfields) Regulations (SRGN No 804B/64)</u></b></p>

	<ul style="list-style-type: none"> <li>Government utilised emergency powers to make the above regulation during a state emergency providing for detention without trial in Highfields.</li> </ul> <p><b><u>Emergency ( Harare ) Regulations (SRGN No 718B/ 64)</u></b></p> <ul style="list-style-type: none"> <li>Government utilised emergency powers to make the above regulation during a state emergency providing for detention without trial in Harare.</li> </ul>
1965	<p><b><u>Constitution of 1965</u></b></p> <ul style="list-style-type: none"> <li>Promulgated after UDI to essentially modify the 1961 constitution.</li> <li>Completely eliminated vestigial British reserved powers.</li> <li>Gave the government the government wide discretionary powers to declare states of emergency, to arrest and detain opponents without trial and to censor publications.</li> </ul> <p><b><u>Tribal Trust Lands Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Changes the name of Native Reserves and creates trustees for the land.</li> </ul>
1966	<p><b><u>Private Voluntary Organisations Act No 63</u></b></p> <ul style="list-style-type: none"> <li>It provides for the registration of private voluntary organizations and controls the collection of contributions to such organisations.</li> </ul>
1967	<p><b><u>Municipal Amendment Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Allowed authorities to segregate parks, sports grounds, swimming baths and public lavatories.</li> </ul> <p><b><u>Censorship and Entertainment Control Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Establishes the a permanent Board of Censorship to examine publications and films of all kinds.</li> </ul>
1968	
1969	<p><b><u>Constitution of 1969</u></b></p> <ul style="list-style-type: none"> <li>Creates Office of the President and divides the parliament into two chambers.</li> <li>Renounces British sovereignty and made the country a republic.</li> <li>Defines the voters' roll on an explicitly racial basis.</li> </ul> <p><b><u>land Tenure Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Repeals the Land Apportionment Act of 1930.</li> <li>Regulates the distribution of land and represents an additional attempt to formalise residential separatism.</li> <li>Divide land equally between the black majority and white minority.</li> </ul>
1970	
1971	<p><b><u>Privileges, Immunities and Powers of Parliament Act No 14</u></b></p> <ul style="list-style-type: none"> <li>Makes provisions in connection with the privileges, immunities and powers of Parliament, the members and office bearers of Parliament and persons employed in the service of Parliament or in the publication of parliamentary papers.</li> <li>Penalize persons who sit or vote in Parliament knowing or having reasonable grounds for knowing that they are not entitled to do so.</li> </ul> <p><b><u>Unlawful Organisations Act No 55</u></b></p> <ul style="list-style-type: none"> <li>Make provisions, in the interests of defence, public safety or public order, for certain organizations to be unlawful organizations and for the circumstances in which organizations may be declared to be unlawful organizations.</li> </ul>
1972	
1973	
1974	
1975	<b><u>Indemnity and Compensation Act No xx</u></b>
1976	<b><u>Press Censorship regulations</u></b>
1977	<p><b><u>Land Tenure Amendment Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Lifts some colour bar laws.</li> </ul>

1978	<p><b><u>Tribal Trust Lands Amendment Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• All reserves made the responsibility of the president.</li> </ul> <p><b><u>Refugees Act No 13</u></b></p> <ul style="list-style-type: none"> <li>• Makes provisions for refugees; to enable effect. to be given to the Convention relating to the status of refugees, done at Geneva on the 28th July, 1951, to the Protocol relating to the status of refugees of the 31st January, 1967 and to the Convention governing the specific aspects of refugee Problems in Africa, done at Addis Ababa on the 10th September, 1969.</li> </ul>
1979	<p><b><u>Constitution of 1979</u></b></p> <ul style="list-style-type: none"> <li>• Produced as a result of the internal settlement agreement.</li> <li>• Created the republic of Zimbabwe-Rhodesia.</li> <li>• Maintained the bicameral legislature from the 1961 constitution.</li> <li>• Contained almost 120 clauses guaranteed a disproportionate European participation in the government.</li> <li>• Election to the Assembly was to be from a common roll.</li> </ul> <p><b><u>Land Tenure (Repeal) Act No 22</u></b></p> <ul style="list-style-type: none"> <li>• Repeals the land tenure Act of 1969.</li> </ul>
1980	<p><b><u>Constitution of 1980</u></b></p> <ul style="list-style-type: none"> <li>• A product of the Lancaster House Conference.</li> <li>• Retained the Office of the President and Parliamentary form of the government.</li> <li>• Contained a declaration of rights which called for the protection of minority rights and was entrenched for ten years.</li> <li>• Provided for the special legislative representation of the Europeans for a period of seven years.</li> <li>• Guarantees that fair compensation would be paid for any land acquired by the new government for resettlement.</li> </ul> <p><b><u>Employment Act No 13</u></b></p> <ul style="list-style-type: none"> <li>• Act to provide regulation of conditions of employment, for registration of private employment bureaus and for the control of the recruiting of persons for employment within or beyond borders of Zimbabwe.</li> <li>• Repeals the African Juveniles Employment Act, The African Labour Regulation Act, the Foreign Migratory Labour Act and the Masters and Servants Act.</li> <li>• Amend the Industrial Conciliation Act.</li> </ul> <p><b><u>Judicial Services Commission Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• Provisions which ensure the autonomy of the judiciary.</li> <li>• Provisions which ensures that the state provides legal counsel for defendants in criminal cases who cannot afford it.</li> </ul> <p><b><u>Public Service Commission (PSC) No xx</u></b></p> <ul style="list-style-type: none"> <li>• Regulates the hiring of civil servants and repeals or the provisions perpetuating racial discrimination.</li> <li>• Regulations to prevent cronyism/patronage within the civil service.</li> </ul> <p><b><u>Government Publications Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• Provisions to ensure that citizens can access public procurement regulations within a reasonable time period.</li> </ul>
1981	<p><b><u>Criminal Procedure and Evidence Act No 15</u></b></p> <ul style="list-style-type: none"> <li>• Provisions to ensure that there is a general right of appeal.</li> </ul>

	<p><b><u>Prisons Act No 29</u></b></p> <ul style="list-style-type: none"> <li>To provide for the establishment of prisons within Zimbabwe, for a prison service, for the management and control of prisons and prisoners lodged.</li> </ul> <p><b><u>Constitution of Zimbabwe Amendment Act No 27</u></b></p> <p><b><u>Constitution of Zimbabwe Amendment ( No 2) Act No 25</u></b></p>
1982	<p><b><u>Ombudsman Act No 16</u></b></p> <ul style="list-style-type: none"> <li>Establishes the office of the Ombudsman whose role is to investigate administrative actions taken by ministries, government departments and statutory authorities which are alleged to have caused injustice.</li> <li>Empowers the Ombudsman to investigate actions by the defence forces, police, prison services and the Cabinet office.</li> <li>The jurisdiction of the Ombudsman is restricted with respect to the Attorney-General and judicial officers.</li> <li>The office may not initiate an investigation in the absence of a complaint.</li> </ul> <p><b><u>Legal Age of Majority Act No 15</u></b></p> <ul style="list-style-type: none"> <li>Recognises women's rights to own property independent of their husbands or fathers.</li> </ul> <p><b><u>University of Zimbabwe No 27</u></b></p>
1983	<p><b><u>Constitution of Zimbabwe Amendment ( No 3) Act No 1</u></b></p>
1984	<p><b><u>Constitution of Zimbabwe Amendment ( No 4) Act No 4</u></b></p> <p><b><u>Citizen of Zimbabwe Act No 23</u></b></p> <ul style="list-style-type: none"> <li>Makes provisions additional to those contained in Articles 4, 5, 6 and 7 of the Constitution regarding citizenship.</li> </ul> <p><b><u>Labour Relations Act 17</u></b></p> <ul style="list-style-type: none"> <li>Repeals the Industrial Conciliation Act of 1959, the Minimum Wages Act of 1980 and the Employment Act of 1980.</li> <li>Provides private sector workers with freedom of association and the right to elect their own representatives publish letters, and set programmes and policies that reflect the political and economic interest of labour.</li> </ul>
1985	<p><b><u>Constitution of Zimbabwe Amendment (No 5) Act No 4</u></b></p> <ul style="list-style-type: none"> <li>Repeals the constitutional guarantee of the government paying of prevailing market prices for any private land it acquires. The amendment allows for compensation to be paid at a "fair" rate fixed by the government and in local currency only.</li> </ul> <p><b><u>Land Acquisition Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Gives government first right to purchase large scale land for resettlement purposes</li> </ul> <p><b><u>Prevention of Corruption Act No 34</u></b></p> <ul style="list-style-type: none"> <li>Provide for the prevention of corruption and the investigation of claims arising from dishonesty, or corruption, and to provide for matters connected therewith or incidental thereto".</li> <li>Regulations concerning gifts and hospitality for the executive.</li> <li>Regulations concerning gifts and hospitality for members of the legislature.</li> </ul> <p><b><u>Electoral Amendment Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Empowers the President to make statutory instruments as he considers necessary or desirable to ensure that any election is properly and efficiently conducted and to deal with any matter or situation connected with, arising out of or resulting from the election.</li> </ul>

	<p><b><u>Education Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• Repeals the Native Education Act.</li> <li>• Provides for the establishment, maintenance and regulation of Government schools, Government teachers colleges and other Government educational facilities.</li> <li>• Provides for the establishment and administration of non-Government schools and teachers colleges, and for the registration and control thereof; to provide for the registration and control of correspondence colleges and independent colleges and for the establishment of an advisory council for such colleges.</li> </ul> <p><b><u>Matrimonial Cases Act No 33</u></b></p> <ul style="list-style-type: none"> <li>• Amends the law relating to marriage, judicial separation and nullity of marriages.</li> </ul>
1986	<p><b><u>Presidential Powers (Temporary Measures) Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• Empowers the President to make 'regulations' for 'urgent' matters 'such ... as he considers will deal with the situation. These regulations 'may provide for any matter or thing for which Parliament can make provision in an Act', except the withdrawal of monies or condonation of over-expenditure from the Consolidated Revenue Fund, and meddling with the Constitution.</li> </ul> <p><b><u>Emergency Powers Amendment Act No 2</u></b></p> <ul style="list-style-type: none"> <li>• Adds new sections 6 and 7 empowering the President to make regulations, once a Constitutional resolution has been passed, in regard to preventive detention of persons and matters related thereto.</li> </ul>
1987	<p><b><u>Constitution of Zimbabwe Amendment (No 6) Act No 15</u></b></p> <p><b><u>Constitution of Zimbabwe Amendment (no 7) Act No 23</u></b></p> <ul style="list-style-type: none"> <li>• Substitutes Chapter IV relating to the executive.</li> <li>• Provides for an Executive President and abolishes the office of the Prime Minister.</li> <li>• Gives the executive wide ranging powers at the expense of the legislature and the judiciary.</li> <li>• Provisions the makes the executive immune from prosecution as long as he is head of state.</li> </ul>
1988	<ul style="list-style-type: none"> <li>• The first Executive President comes into power I January 1988.</li> </ul>
1989	<p><b><u>Constitution of Zimbabwe Amendment (No 8) Act No 4</u></b></p> <p><b><u>Constitution of Zimbabwe Amendment (No 9) Act No 31</u></b></p> <ul style="list-style-type: none"> <li>• Empowers the President to declare a state of emergency unilaterally for a period of up to 14 days.</li> </ul> <p><b><u>Witchcraft Suppression Act No 18</u></b></p> <ul style="list-style-type: none"> <li>• Re-enacts the 1899 Witchcraft Suppression Ordinance which criminalizes purporting to practise witchcraft.</li> </ul>
1990	<p><b><u>Electoral Act No 7</u></b></p> <ul style="list-style-type: none"> <li>• Stipulates that the political parties shall have "reasonable" access to media.</li> <li>• Establishes an Electoral Supervisory Commission with limited power because its structures are staffed by personnel fro the Public Service Commission.</li> </ul> <p><b><u>Constitution of Zimbabwe Amendment (No 10) Act No 15</u></b></p> <ul style="list-style-type: none"> <li>• Grants the president the sole power to dissolve the sole power to dissolve the Parliament to appoint or remove a vice president, and any minister or deputy minister.</li> <li>• Allows the president to appoint twenty of the 150 members of the parliament.</li> </ul> <p><b><u>Constitution of Zimbabwe Amendment (No 11) Act No 30</u></b></p> <ul style="list-style-type: none"> <li>• Allows for the compulsory acquisition of land at rates fixed by the government.</li> <li>• Allows the corporal punishment of minors.</li> </ul>



	<p><b><u>Customary Law and Local Courts Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Creates a unitary court system, consisting of headmen's courts, chiefs' courts, magistrates' courts, the High Court and the Supreme Court.</li> </ul> <p><b><u>National University of Science and Technology Amendment Act No 22</u></b></p> <ul style="list-style-type: none"> <li>Limits academic freedom by making the National University of Science and Technology (NUST) subjective to strong government influence.</li> </ul> <p><b><u>University of Zimbabwe Amendment Act No xx</u></b></p> <ul style="list-style-type: none"> <li>States that the Ministry of Higher Education and Technology controls the appointment of the Chancellor and Vice Chancellor.</li> <li>Extends the disciplinary power of university authorities against staff and students.</li> </ul> <p><b><u>National Council for higher Education No 32</u></b></p> <ul style="list-style-type: none"> <li>Limits academic freedom by making Institutions of higher education subjective to strong government influence</li> </ul>
1991	<p><b><u>Commission of Inquiry Act No 4</u></b></p> <ul style="list-style-type: none"> <li>Grants the President broad powers to appoint commissions of inquiry into matters of public concern.</li> </ul> <p><b><u>Constitution of Zimbabwe Amendment (No 10) Act</u></b></p>
1992	<p><b><u>Rural District Councils ( Election) Regulations S.I No 392</u></b></p> <ul style="list-style-type: none"> <li>Provides for rules in respect of nomination of candidates, procedure before commencement of poll, procedure at poll, voting by post, procedure after close of poll and election in commercial wards.</li> </ul> <p><b><u>Civil Evidence Act No 15</u></b></p> <ul style="list-style-type: none"> <li>Provides for rules in respect of , <i>inter alia</i>, competence and compellability of witnesses, privilege from incrimination in respect of criminal proceedings, penalties of forfeiture, privilege relating to legal profession, privilege in public interest, documentary evidence.</li> </ul> <p><b><u>Electoral Amendment Act No 7</u></b></p> <ul style="list-style-type: none"> <li>Amendments concerning conditions of office of members, variation of office by member, removal of members from office, staff of Commission, meetings and procedures of commission, remuneration and expenses of members, and duties of the registrar-General towards the commission.</li> <li>Repeals section 36 and 93 of the Electoral Act, 1990.</li> </ul> <p><b><u>Criminal Procedures and Evidence Amendment Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Provisions which substantially reduce the power of the magistrates to grant bail without the consent of the Attorney General or his agent.</li> </ul> <p><b><u>Disabled Persons Act No 5</u></b></p> <ul style="list-style-type: none"> <li>Prohibits discrimination against people with disabilities in employment, admission to public places, or provision of services.</li> </ul> <p><b><u>Labour Relations Amendment Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Specifies that workers may establish independent worker committees, which exist side by side with unions. The effect of the amendment is to dilute the union.</li> <li>Permits unions to bargain collectively over wages.</li> <li>Streamlined the procedure for adjudicating disputes by strengthening the Labour Relations</li> </ul>

	<p>Tribunal.</p> <p><b><u>Political Parties (Finance) Act No 14</u></b></p> <ul style="list-style-type: none"> <li>• Provides for the financing of political parties.</li> <li>• Parties are required to register with the Minister of Justice, Legal and Parliamentary Affairs in order to receive a grant from the State.</li> <li>• The total amount payable is proportional to the number of elected party representatives who are members of Parliament provided they are no fewer than 15.</li> <li>• The Minister can reject an application for registration and the party can appeal against this decision to the High Court.</li> </ul> <p><b><u>Land Acquisition Act No 3</u></b></p> <ul style="list-style-type: none"> <li>• Denies farmers whose lands have been designated for acquisition adequate due process.</li> <li>• They may only appeal the amount of compensation in administrative courts.</li> </ul> <p><b><u>Private Voluntary Organisations</u></b></p>
1993	<p><b><u>High Court of Zimbabwe (Amendment) Rules, No 28</u></b></p> <ul style="list-style-type: none"> <li>• Amendments concerning party in default at trial, setting aside of default judgement by consent, application for dismissal of action, failure to make discovery or permit inspection, extension of time.</li> </ul> <p><b><u>Constitution of Zimbabwe Amendment (No 12) Act No 4</u></b></p> <ul style="list-style-type: none"> <li>• Declared that the courts did not have jurisdiction to determine questions of compensation for compulsory acquisition of land.</li> <li>• Contains various amendments relating to the police force, defence force and prison service.</li> </ul> <p><b><u>Constitution of Zimbabwe Amendment (No 13) Act No 9</u></b></p> <ul style="list-style-type: none"> <li>• Adds sub-sections 15(5) and 15(6) which provide explicitly for the imposition of a death penalty.</li> <li>• Declared that neither treatment of prisoners nor delays in carrying out their sentences entitle prisoners to a stay or remission of sentence.</li> </ul>
1994	
1995	<p><b><u>Electoral (Applications, Appeals and Petitions) Rules S.I 74A</u></b></p> <ul style="list-style-type: none"> <li>• Provides rules for elections, regarding, <i>inter alia</i>: petitions regarding vacancies in Parliament, appeals regarding nomination of candidates, inspection of ballot papers, payment of disputed claims and election expenses, and election petitions.</li> </ul> <p><b><u>Welfare Organisation Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• Empowers the Minister of Social Welfare, Labour, and Public Service to suspend the executive body or "any member" of the executive committee of an organization and to appoint persons to manage the affairs of the organization for a specified time.</li> </ul>
1996	<p><b><u>Constitution of Zimbabwe Amendment (No 14) Act No 14</u></b></p> <ul style="list-style-type: none"> <li>• Denies both men and women the right to confer automatic residency on their foreign spouses.</li> <li>• Repeals section 11 of the constitution which specifies protection for the right to the privacy of one's home and from the compulsory acquisition of property without compensation.</li> <li>• Amends certain provisions relating to rights.</li> <li>• A new preamble to section 11 provides for the limitation on certain protections in the public interest.</li> <li>• An amendment to section 23 prohibits discrimination based on sex unless such an action would be in the interest of defence, safety or public morality.</li> </ul> <p><b><u>Mental Health Act No 15</u></b></p> <p>An act to consolidate and amend the law relating to the care, detention and after-care of persons who are mentally disordered or intellectually handicapped, whether for the purposes of treatment or otherwise; to provide for the establishment of various boards and the functions of such boards; to</p>

	repeal the Mental Health Act [Chapter 15:06]; and to provide for matters incidental to or connected with the foregoing.
1997	<p><b><u>Ombudsman Amendment Act No 4</u></b></p> <ul style="list-style-type: none"> <li>Amends provisions of the Ombudsman Act regarding jurisdiction of the Ombudsman with the effect of limiting the areas that can be investigated by the Office of the Ombudsman.</li> </ul> <p><b><u>Administration of Estates Amendment Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Repealed inheritance laws unfavourable to widows.</li> </ul>
1998	<p><b><u>Prevention of Discrimination Act No 19</u></b></p> <ul style="list-style-type: none"> <li>To prohibit discrimination on the ground of race, tribe, place of origin, national or ethnic origin, political opinions, colour, creed or gender and to provide a remedy for persons injured by such discrimination; to prohibit the promotion of such discrimination.</li> <li>Amends s3 of the Unlawful Organisations Act by inserting “The President may, by proclamation, declare any organization to be an unlawful organization if the President is satisfied on reasonable grounds that the activities of the organization are aimed at promoting, inciting or propagating discrimination against any person or class of persons on the grounds of race, place of origin, national or ethnic origin, colour, creed or gender of any person or class of persons.”</li> <li>Amends s4 of the Education Act to prohibit any form of discrimination in admitting students to schools.</li> <li>Repeals The Public Premises (Prevention of Racial Discrimination) Act [Chapter 8:12] and the Immovable Property (Prevention of Discrimination) Act [Chapter 10:12] are repealed.</li> </ul> <p><b><u>Constitution of Zimbabwe Amendment( No 15) Act No 10</u></b></p> <ul style="list-style-type: none"> <li>Amends definition of “ special court” in s 4(a) of Article 92 and dates of the fiscal year.</li> </ul> <p><b><u>Witness Protection Act 112</u></b></p> <ul style="list-style-type: none"> <li>Provisions for the protection of witnesses.</li> </ul>
1999	<p><b><u>Referendum Act No 24</u></b></p> <ul style="list-style-type: none"> <li>Deals with referendum proclamation, issues to be stated on the ballot papers, persons entitled to vote, majorities necessary to decide questions at the referendum, declaration of the results of the referendum and appeals.</li> </ul>
2000	<p><b><u>Electoral (Amendment) Regulations, 2000 (No. 7)</u></b></p> <ul style="list-style-type: none"> <li>Removed authority to accredit observers/monitors from the Electoral Supervisory Commission (ESC) and gave it to the Registrar-General. The ESC viewed the accreditation requirement as usurpation of its constitutional authority (s.61 (6)) to supervise elections independently of any direction or control by any other person or authority.</li> <li>Makes provision for the code of conduct for election agents, monitors and observers.</li> </ul> <p><b><u>Constitution of Zimbabwe Amendment (No 16 ) Act 5</u></b></p> <ul style="list-style-type: none"> <li>Creates an Anti-Corruption Commission whose nine members would be appointed by the State President.</li> <li>Provisions which allows the government to compensate only for improvements effected to the land acquired for land reform.</li> <li>Shifts the obligation to pay compensation for land acquired for resettlement to the former colonial power.</li> </ul> <p><b><u>Labour Relations (Amendment) Act No 24</u></b></p> <ul style="list-style-type: none"> <li>Amends labour Relations Act and Public Service Act on the basis of recommendations of the ILO.</li> <li>Makes provisions for prohibition of forced labour and sexual harassment, employment of young persons, maternity leave, composition, procedure and functions of work of councils and certification of trade unions, settlement of labour disputes, collective bargaining agreements, etc.</li> </ul> <p><b><u>Presidential Powers( Temporary measure) ( Broadcasting) Regulations</u></b></p> <ul style="list-style-type: none"> <li>Invoked by the President to shut down the Capital Radio.</li> </ul>

	<p><b><u>Presidential Powers ( Temporary measure) (Land Acquisition) Regulations</u></b></p>
2001	<p><b><u>Broadcasting Services Act No 3</u></b></p> <ul style="list-style-type: none"> <li>• Concentrates regulation of electronic media in the Minister of Information who appoints members of the Broadcasting Authority of Zimbabwe, (BAZ) which issues operating licences.</li> <li>• Makes the Minister the licensing authority enjoying absolute discretionary power over a whole range of matters relating to broadcasters.</li> <li>• Includes a provision requiring that programming include at least 75 per cent local content</li> <li>• Bars foreign ownership.</li> </ul> <p><b><u>Citizen of Zimbabwe Amendment Act No 12</u></b></p> <ul style="list-style-type: none"> <li>• Requires all citizens with a claim to dual citizenship to renounce their claim to foreign citizenship in accordance with the laws of the foreign country by January 2002 to retain their Zimbabwean citizenship and the right to vote.</li> </ul> <p><b><u>Sexual Offences Act No 8</u></b></p> <ul style="list-style-type: none"> <li>• Amends the criminal law in regard to sexual offences</li> <li>• To make further provision for the suppression of brothels and prostitution; to discourage the spread of the human immuno-deficiency virus.</li> </ul>
2002	<p><b><u>Public Order and Security Act No 1</u></b></p> <ul style="list-style-type: none"> <li>• S23-31-gives the Zimbabwean police force excessive powers to ban or disrupt public gatherings at their discretion.</li> <li>• Forbids public demonstrations and protests.</li> <li>• S16 forbids criticism of the President.</li> <li>• S21 makes acts or statements engendering feelings of hostility towards police punishable up to 2 years in prison.</li> <li>• Limits public assembly.</li> <li>• POSA requires any organizer of a meeting or rally to give at least four days of written notice of the gathering to the Police.</li> <li>• Repeals the Law and Order (Maintenance) Act [Chapter 11:07].</li> </ul> <p><b><u>Access to Information and Protection of Privacy Act No 5</u></b></p> <ul style="list-style-type: none"> <li>• S38-42 establishes the Media Information Commission which is appointed by the Minister of Information who is also a Presidential appointee. The commission has the power to accredit journalists, to register and regulate mass media outlets. It also has the power to deregister organisations and also has wide disciplinary powers.</li> <li>• Criminalizes legitimate investigation of into the conduct of the state by the media and individuals.</li> </ul> <p><b><u>Labour Relations (Amendment) Act No 17</u></b></p> <ul style="list-style-type: none"> <li>• Makes provides for extension of purpose labour relations to include advancement of social justice and democracy in the work place.</li> <li>• Makes provision for the prohibition of sex discrimination, employment of young persons, duration, particulars and termination of employment contract.</li> </ul> <p><b><u>Presidential Powers ( Temporary measure) (Election Act Modification Notice</u></b></p> <ul style="list-style-type: none"> <li>• Disenfranchised all potential postal voters out of the country save those in the army, the police force or working for the government and overseas state services and their spouses. This change deprived a potentially significant number of Zimbabwean nationals abroad of their right to vote.</li> <li>• Confirmed the withdrawal from constituency registrars of the responsibility for issuing postal ballots and its vesting in the Register-General.</li> </ul>
2003	<p><b><u>Citizenship of Zimbabwe Amendment Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• Removes the renunciation requirement for persons born in the country with parents from</li> </ul>

	<p>Southern African Development Community (SADC) countries or who were born in SADC countries with parents from Zimbabwe.</p> <p><b><u>Labour Relations Amendment Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• Harmonizes the Labour Relations Act governing private sector workers and the Public Servants Act dealing with the private sector.</li> <li>• The harmonisation has had the effect of taking away important rights from unionized workers, severely limiting the right to strike.</li> <li>• Expands the definition of “essential services” – where workers may not strike at all.</li> </ul>
2004	
2005	<p><b><u>Constitution Amendment (No 17) Act No 5</u></b></p> <ul style="list-style-type: none"> <li>• Allows the government to restrict foreign travel for reasons of national security and public order or economic interests of the state.</li> <li>• Abolishes the Electoral Supervisory Commission (ESC) and the Zimbabwe Electoral Commission as the only constitutional body in charge of elections.</li> <li>• Empowers the executive to appoint any other minister other than the responsible Minister to acquire land for resettlement purposes.</li> <li>• Introduces a chamber of senators to the legislature consisting of sixty-six Senators, where six are appointed by the President.</li> <li>• Adds persons with disabilities as a group protected from discrimination.</li> </ul>

## Appendix 1B: Time Line of Legislation for the *de jure* Property Rights Indices

### Time Line of Legislation for the *de jure* Property Rights Indices

Year	Act Title and its Provisions
Up to 1946	<p><b><u>Land Apportionment Act No, 1930</u></b></p> <ul style="list-style-type: none"> <li>Divides Southern Rhodesia into a European Area, an African Area, an Unreserved Area and National land.</li> <li>Effectively prevents Africans from leasing, acquiring or occupying property in European areas and Europeans from doing the same in African Areas.</li> </ul> <p><b><u>Land Apportionment Act No 11, 1940</u></b></p> <ul style="list-style-type: none"> <li>Establishes the Special Native Area which added an additional area of over 19 million acres to the Reserves set aside for the sole and exclusive use and occupation by tribesman.</li> <li>Provisions for the constitutional protection of the added land.</li> <li>Vests the right of searching and mining and disposing of all minerals, mineral oils and natural gases in the governor (head of state).</li> </ul>
1947	
1948	
1949	
1950	<b><u>Land Apportionment Amendment Act No 25</u></b>
1951	<p><b><u>Native Land Husbandry Act</u></b></p> <ul style="list-style-type: none"> <li>Act meant to enforce private ownership of land.</li> <li>Introduces stringent measures to force African farmers to de-stock and modify land tenure practices.</li> <li>Special provision made for compensation for any loss suffered by Africans removed from Tribal Trust Lands which is required for setting aside an African Township, for purposes of conservation of natural resources or for other purposes in African interest.</li> </ul>
1952	<p><b><u>Municipal Act 34</u></b></p> <ul style="list-style-type: none"> <li>Makes provisions for compensation of land taken for purposes or when materials are removed from such land for public purposes.</li> </ul>
1953	
1954	
1955	
1956	
1957	
1958	
1959	
1960	
1961	<p><b><u>1961 Constitution Adopted</u></b></p> <ul style="list-style-type: none"> <li>The legislature was given power to amend the Land Apportionment Act and to make provisions for the opening up of the land to all races.</li> </ul> <p><b><u>Land Apportionment Amendment Act No. 37</u></b></p> <ul style="list-style-type: none"> <li>Creates a category of land open to all races.</li> </ul>
1962	
1963	<p><b><u>Rural Land Act No 67</u></b></p> <ul style="list-style-type: none"> <li>Establishes the rural land board which approves transfers of land rights in native purchase areas.</li> </ul>
1964	
1965	<p><b><u>Tribal Trust Lands Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Changes the name of Native Reserves and creates trustees for the land.</li> </ul>
1966	
1967	

1968	
1969	<p><b><u>land Tenure Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• Repeals the Land Apportionment Act of 1930.</li> <li>• Regulates the distribution of land and represents an additional attempt to formalise residential separatism.</li> <li>• Divide land equally between the black majority and white minority.</li> </ul>
1970	
1971	
1972	
1973	
1974	
1975	<p><b><u>Parks and Wildlife Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• Abolishes state controls on hunting, giving property owners the right to manage wildlife on their land, even if they did not own the wildlife.</li> <li>• Allowed private land owners the possibility of gaining revenue from use of the resource by selling hunting and game viewing licenses.</li> </ul>
1976	
1977	<p><b><u>The Land Apportionment Amendment No xx Act</u></b> Amended to allow Africans to purchase Land.</p>
1978	<p><b><u>Tribal Trust Lands Amendment Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• All reserves made the responsibility of the president.</li> </ul>
1979	<p><b><u>Land Tenure (Repeal) Act No 22</u></b> Repeals the land tenure Act of 1969.</p>
1980	<p><b><u>1980 Constitution of Zimbabwe adopted</u></b></p> <ul style="list-style-type: none"> <li>• A provision that commercial farm land could not be acquired by the state for resettlement except on a "willing buyer, willing seller" basis unless it was "underutilized."</li> <li>• Constitutional protection of all private property and guarantee of receiving prevailing market price in the currency of one's choice in the case of government acquiring the land for resettlement purposes.</li> </ul>
1981	<p><b><u>Communal Land Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• The act was designed to change Tribal Trust Lands into Communal Areas which resulted in the shift of land authority from traditional leadership to local authorities.</li> </ul>
1982	
1983	
1984	
1985	<p><b><u>Constitution of Zimbabwe Amendment (No 5) Act No 4</u></b></p> <ul style="list-style-type: none"> <li>• Amendment allowing for compensation to be paid at a "fair" rate fixed by the government and in local currency only.</li> </ul> <p><b><u>Land Acquisition Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• Gives the government the first right to purchase large scale farms for resettlement of indigenous people on a willing seller/willing buyer principle agreed upon in the Lancaster House Constitution.</li> </ul>
1986	<p><b><u>Presidential Powers (Temporary Measures) Act No xx</u></b></p> <ul style="list-style-type: none"> <li>• Empowers the President to make 'regulations' for 'urgent' matters 'such ... as he considers will deal with the situation. These regulations 'may provide for any matter or thing for which Parliament can make provision in an Act', except the withdrawal of monies or condonation of over-expenditure from the Consolidated Revenue Fund, and meddling with the Constitution</li> </ul>
1987	
1988	
1989	
1990	<p><b><u>Constitution of Zimbabwe Amendment (No 11) Act No 30</u></b> Allows for the compulsory acquisition of land at rates fixed by the government.</p>
1991	
1992	<p><b><u>Land Acquisition Act No 3</u></b></p> <ul style="list-style-type: none"> <li>• Specifies the legal procedure to be followed by the acquiring authority in the compulsory acquisition</li> </ul>

	<p>of land.</p> <ul style="list-style-type: none"> <li>Includes provisions for the judicial review of compulsory acquisition orders.</li> </ul>
1993	
1994	<p><b><u>Constitution of Zimbabwe Amendment Act 14</u></b></p> <ul style="list-style-type: none"> <li>Removed the constitutional protection of compensation for land in the compulsory acquisition process.</li> </ul>
1995	
1996	
1997	
1998	
1999	
2000	<p><b><u>Constitution of Zimbabwe Amendment (No 16 ) Act 5</u></b></p> <ul style="list-style-type: none"> <li>Provisions which allows the government to compensate only for improvements effected to the land acquired for land reform.</li> <li>Provisions which removed the obligation of the government to pay compensation to the owners of land acquired by the state for land reform purposes , shifting the onus to the former colonial power instead.</li> <li>Expanded the ground on which property can be compulsorily acquired.</li> </ul>
2001	<p><b><u>Rural Land Occupiers ( Protection from eviction) Act</u></b></p> <ul style="list-style-type: none"> <li>Provided that anyone who had taken up occupation of rural land on or before 1 March 2001 in anticipation of resettlement and who was still occupying that land on the date of commencement of the Act was a “protected occupier.</li> <li>Persons designated as “protected occupiers” were protected from eviction, for a minimum of six months.</li> <li>Further removed the possibility of legal action against a “protected occupier” for trespass, or damages in relation to trespass.</li> </ul> <p><b><u>Presidential Powers ( Temporary measure) (Land Acquisition) Regulations S.I 338</u></b></p> <ul style="list-style-type: none"> <li>Amends the 1992 Land Acquisition Act to effectively give the government immediate rights to land designated for compulsory acquisition.</li> <li>States that while legal occupier of a designated property would still be entitled to three months to vacate “land other than agricultural land required for resettlement”, the notice period to vacate agricultural land was reduced to 45 days.</li> </ul>
2002	<p><b><u>Land Acquisition Amendment (No. 2) Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Confirms the amendments to the Land Acquisition Act made under the Presidential Powers (Temporary measure) (Land Acquisition) Regulations of 2001.</li> <li>Provisions which allowed the government to re-issue acquisition orders (including those that had been invalidated by High Court rulings).</li> <li>Allowed the government to give just seven days’ notice to vacate property in cases where 90 days had elapsed since the service the previous invalid acquisition order.</li> </ul>
2003	
2004	<p><b><u>Land Acquisition Amendment Act No xx</u></b></p> <ul style="list-style-type: none"> <li>Removes the need to serve a personal notice on owners of land designated for compulsory acquisition (or any other person who under the original Act has a legal right to be notified in person), publication in the government gazette and one newspaper is deemed sufficient.</li> </ul>
2005	<p><b><u>Constitution Amendment (No 17) Act No 5</u></b></p> <p>Empowers the executive to appoint any other minister other than the responsible Minister to acquire land for resettlement purposes.</p>



## **Appendix 2: Construction of Macroeconomic Variables.**

### ***Appendix 2A: Construction of the Real FDI Stocks for Zimbabwe, 1964 to 2005***

The UNCTAD data set on FDI stocks starts in 1980 and is inadequate for the purposes of this study. We generated the real FDI stocks in Zimbabwe million dollars for 1964 to 2005 using the standard perpetual inventory model<sup>74</sup> of the following form  $k_t = k_{t-1} + I_t - \delta k_{t-1}$ , where  $k_{t-1}$  is the stock of capital at time t-1,  $I_t$  is the flow of investment during the period t and  $\delta$  is the rate at which the capital depreciates.

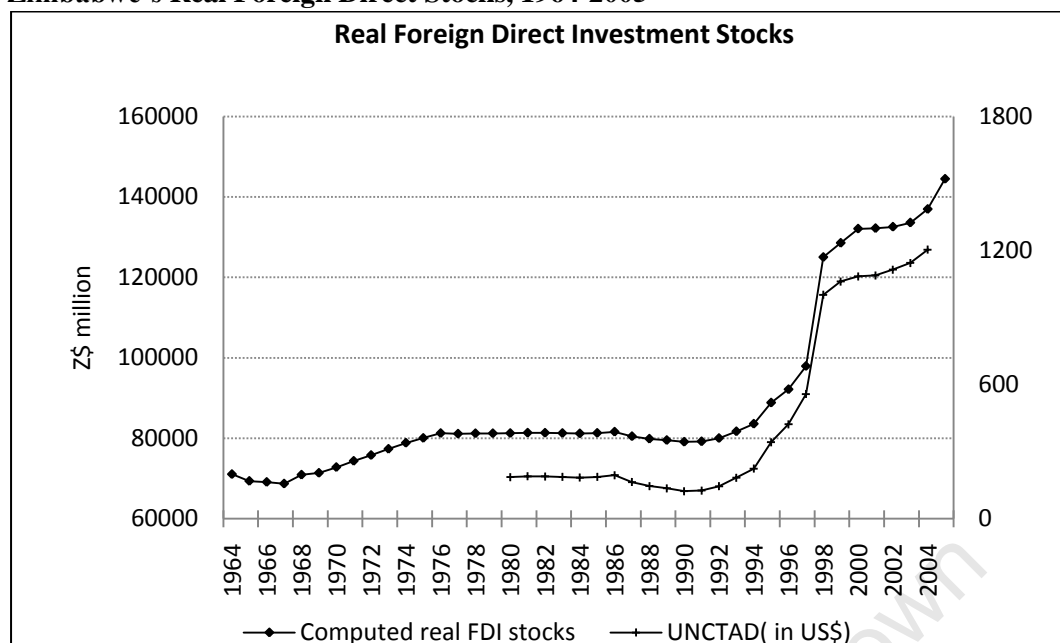
We used the annual FDI inflows adjusted for remittances of profits and dividends. The net FDI inflows data is obtained from the UNCTAD FDI data base which covers the period 1970 to 2005. The 1964 to 1969 FDI inflows data is obtained from the Balance of Payments (BOP) data extracted from the Economic Surveys of Southern Rhodesia and published in McKinnell (1969: 586, table 2) and Stoneman (1976:33, table 4). The initial stock of FDI in 1963 is obtained from Stoneman's computation based on the 1963 Central Statistical Office (CSO) survey of the external corporate investments in Southern Rhodesia and published in Clarke (1980: 32).

The FDI net inflows as well as the initial FDI stock are converted to the Zimbabwe dollar using the World Bank conversion factor and deflated by the GDP deflator with 2000 as the base year. Following the UNCTAD practise,  $\delta$  is assumed to equal zero so that no depreciation is allowed for. The resulting index of the FDI stocks is shown below. The surge in FDI stocks in 1998 resulted from the liberal reforms brought about by the Economic Structural Adjustment Programme (ESAP) of 1990.

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<sup>74</sup> See Ramirez (2000, 2005) for a similar approach in the cases of Mexico and Chile.

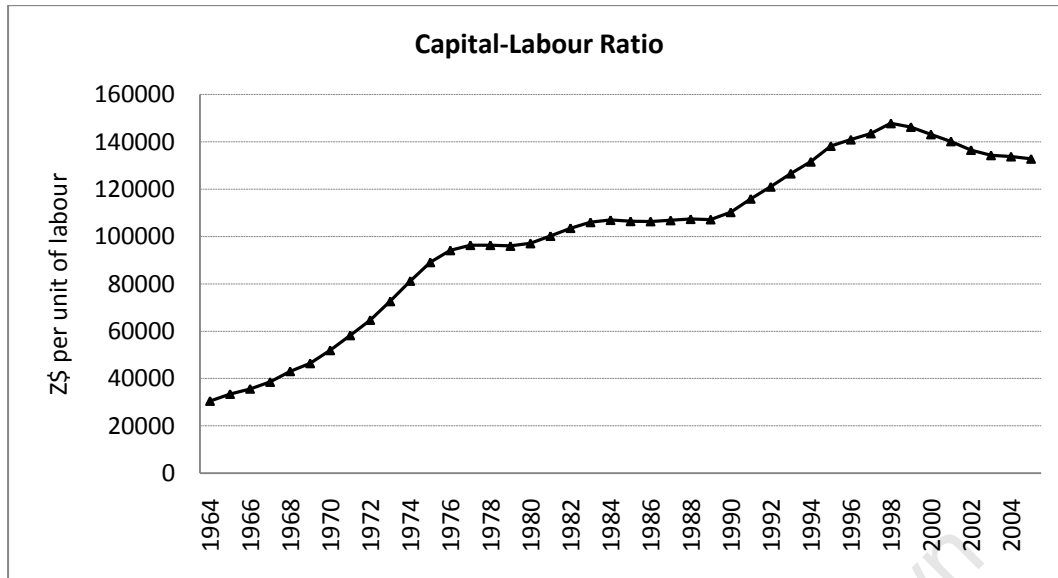
### Zimbabwe's Real Foreign Direct Stocks, 1964-2005



### Appendix 2B: Construction of the Capital-labour Ratio for Zimbabwe, 1964 to 2005

The capital-labour ratio is computed by dividing the total physical capital stock by the size of the labour force. The capital stock is computed using the above explained standard perpetual inventory approach. Real GFCF is used for investment data. Although it would have been ideal to use private sector GFCF, available data sources do not distinguish between private and state capital. The initial capital stock is estimated by aggregating the real GFCF in the period 1960 to 1963. In the subsequent years,  $\delta$  is assumed at 5%. We divide the real capital stock by total labour force to obtain the capital-labour ratio. The labour force data is obtained from the World Bank Development Indicators online database. The diagram below shows the capital-labour ratio.

### Zimbabwe's Capital Labour-Ratio, 1964-2005



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